

OF THIS WE APPROVE

(No. 3)

By the Editor

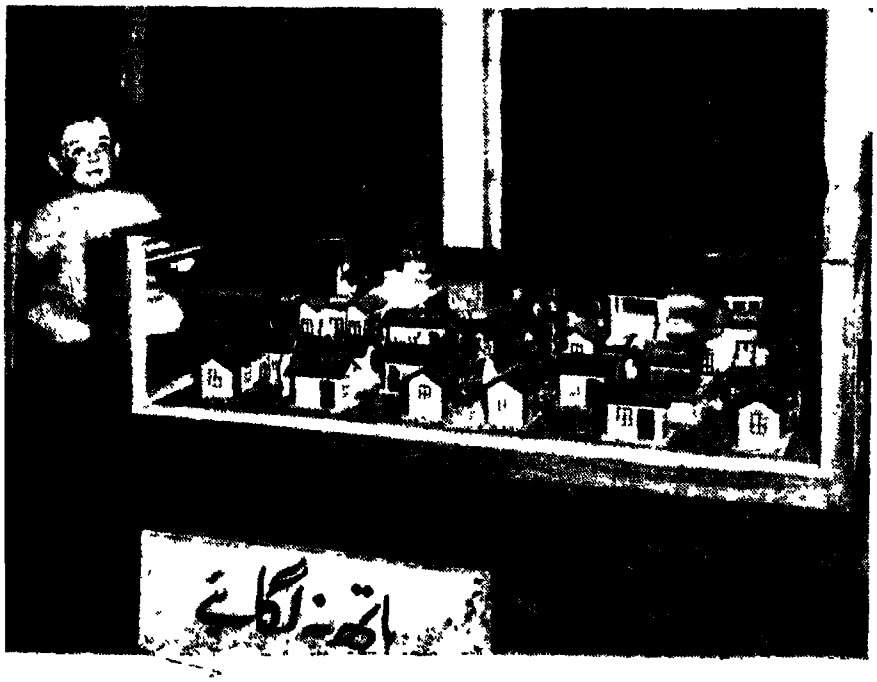


THE Baroda Municipality has established a health museum which, to the best of our knowledge, is one of the very few of its kind in India The aims and objects of this museum have been approved by experts in this field both in Europe and America

The museum has been started with a modern collection of hygienic models which the ex-government of Baroda has collected and which had been recently given to the Municipality for use. The museum has been able to gather posters and exhibits from a number of local and foreign agencies. The Baroda Tuberculosis Association has contributed to a fund to assist in purchasing some artistic tuberculosis models and the Baroda Education Trust has contributed a small sum to help purchase a miniature glass man from Germany In addition to supplying the building

(*Continued on p 5*)

Photos By the Author



Top right Interior of one of the rooms at the museum

Bottom left A model village.

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January 1957

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DUNBAR SMITH, M.D., D.N.B., D.T.M. & H. (LOND.), Associate Editor

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OUR COVER

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Minute Meditations

HOW IS YOUR HEALTH CONSCIENCE?

D. A. Delafield

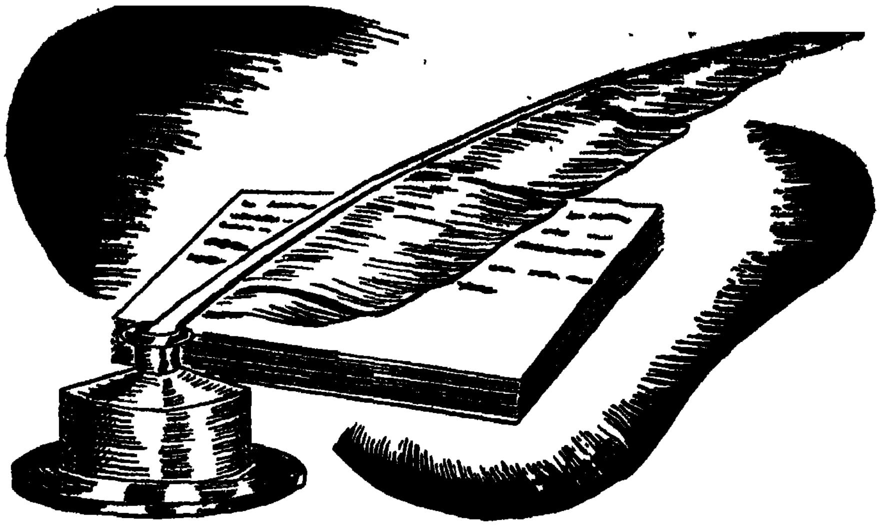
"Beloved, I wish above all things that thou mayest prosper and be in health, even as thy soul prospereth." John 2:3.

NEXT to a good conscience comes good health. The care of body and soul are equally important. Many of us give little attention to either, taking physical health for granted and hoping that an occasional trip to church on Easter or Christmas will suffice for the soul. Nothing is farther from the truth. The health of the body and the soul are not the result of chance but of careful attention to the claims of enlightened conscience.

Now most of us have a moral conscience. We would not steal or kill or lie or commit adultery. The inner voice rules this moral lawlessness out. But few of us have a health conscience with definite scruples against alcohol, tobacco, tea, coffee, over-eating, under-eating, late hours, no hours, cola drinks, and a hundred other health-cheating indulgences.

Be honest now. Do you think of your daily habits in terms of "physical morality"? Do you feel it a duty to guard your health as sacredly as your character? Your body is the temple of God, in which His Spirit dwells. You should think of yourself with dignity, as made in the image of God. It is your responsibility to take care of that body temple as faithfully as you do your soul. An educated health conscience will insist on proper attention to body care. And if you really want good health, it is your responsibility to acquire that conscience. Now, here are the essential factors: good

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THE EDITOR SAYS

As WE are entering the new year we could very easily consider the situation in which the world finds itself today; we could very easily concern ourselves with the problems that face humanity and the perplexities which confront us each day. However, since most of us have all too many worries these days let us for a moment pause to think of the opportunities that lie before us rather than the perplexities and the problems that we will have to face.

Each day that comes brings us, each, new opportunities, new privileges that we have never had before. It has been said that opportunity knocks on every man's door once, but only once. That may be true in a way and yet it is also true in other ways that opportunities come to us repeatedly and daily. The way in which we relate ourselves to these opportunities that come to us daily, determines how we live our lives and how, when the day's work is finished and when the life journey is coming to an end, we look back upon the life that we have lived, either with joy and satisfaction or with regret and shame.

To each of us, each day, comes opportunity with an invitation to do some little act of kindness for someone. Perhaps it is just a smile, perhaps a cheering word, perhaps a helping hand, but whatever it may be an opportunity has come and we have the privilege of reaching out and grasping that opportunity Thus we have the privilege of making our life more full, more worth while, more valuable to our fellow-men. Too often, when opportunities knock, we turn them from our door with a shrug, with a smirk attitude of indifference, with an attitude of complacency or even a manner that is offensive.

As we were reading the other day, we saw a little article entitled "Opportunity Tried to Knock." It was written by Webb D. Garrison might enjoy [illegible] with you, and as you read it through, you may perhaps apply the lesson to yourself.

"There is a familiar proverb to the effect that 'Opportunity knocks on every man's door once, but only once.' Here are a few instances when the knock was not heard:

"A Nottingham plumber submitted to the British War Office in 1911 the design for a tank—a then unknown military device. Across the drawing cover in red ink, was written the official comment; 'This man is mad.'

"It is difficult to give proper recognition to those who loaned to Robert Fulton the money for his steamboat project. So fearful of ridicule were his backers that they stipulated that their names be withheld!

"When George Westinghouse had perfected his air brakes, in 1875, he offered it to Commodore Vanderbilt. The railroad magnet returned Westinghouse's letter, with these words scribbled across the bottom: 'I have no time to waste on fools.' One day a stranger approached Mark Twain with a request for $500, for which he would sell half interest in his invention. Twain, 'bit' several times before, refused flatly but out of curiosity he asked the stranger his name. 'Bell,' the man replied, as he

THE EDITORIAL STAFF
Wish You
The Best of Health
in
1957

[illegible] Alexander Graham [illegible]

"It wasn't a stranger who approached Sir Arthur Conan Doyle with a proposition. A young actor, playing in one of Doyle's productions, suggested that he and the writer agree to divide their incomes with one another for the rest of their lives. Doyle laughed heartily. 'Charlie Chaplin,' he said, 'if I did not know you were joking, I would have you fired for such audacity!'

When opportunity knocks at our door let us be cautious but let us be sure that we make right decisions and that when opportunity comes we answer faithfully and well throughout this new year of 1957.

How Is Your Health Conscience?

(Continued from p. 3.)

food eaten only at mealtime—the amount to be determined by the physical activity of the day—plenty of pure water, outdoor exercise at least an hour or two every day, and lots of fresh air, calm trust in God, refreshing sleep, and wholesome mental activity to keep the electric currents of the mind flowing freely to every part of the body.

Memorize this list of factors in building a health conscience. Then keep your health conscience alive to prompt your will to daily action! Don't be a crank and go so far that you will be thinking about yourself all the time. On the other hand, don't laugh at the laws of life. This is no symptom of noble independence, but on the contrary, it is one of ignorance and pride.

With this simple knowledge you may start building health. It won't come by accident. You can't buy it with silver and gold. No one else can share it with you. You can't receive it as a gift. But like character it is the product of careful listening to the claims of conscience. Then why not begin heeding that inner voice today? It will pay you well.

OF THIS WE APPROVE

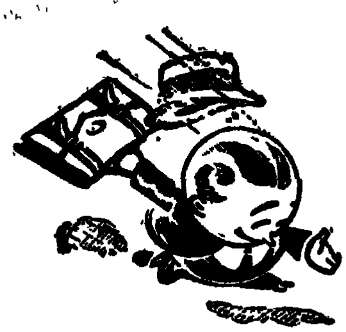
(Continued from p. 2.)

which houses the museum, the Municipality of Baroda has also spent from its own funds in proportion to its limited resources. Several firms and foundations including the West German Federal Government and the Dresden Museum have donated scientific models and charts for the use of the health museum in Baroda.

The Municipality has wisely located the museum in an excellent building in ideal surroundings near the Museum of Antiquity and the Picture Gallery in the Sayaji Park and Zoological and Botanical Gardens. This is a place where thousands of people on holiday come daily to enjoy the amenities provided therein.

We say that they have located the institution wisely because if such an institution is going to serve its purpose it must be readily accessible to the public and inasmuch as from 200 to 2,000 people visit the museum daily it indicates that its location is a good one.

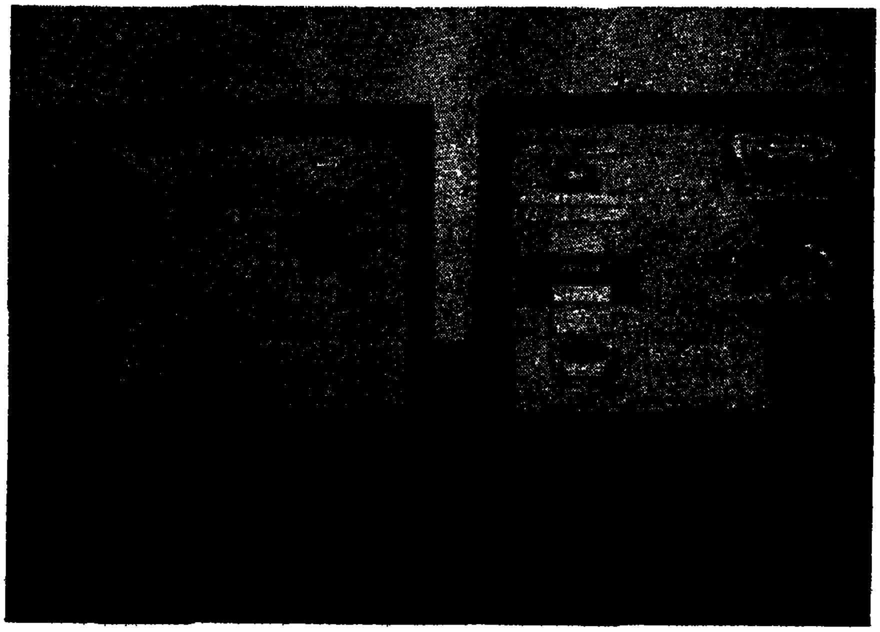
The models, specimens and posters that are exhibited in the



museum cover almost every phase of health and sanitation. The museum committee under the guidance of the health educationalists and museologists and the Baroda Medical College staff are continually at work to add new and original models, charts and posters to the collection which is already outstanding in its field.

The curator of the museum, at the time of our visit, Syed Fakhruddin Husain-Khan, B.S., M.S.P.H., Doctor Ph. (Michigan, U.S.A.), M.A., Pha., etc., is a gentleman admirably qualified for his work. He gives free lectures regularly on birth control, family planning, first aid, and various health topics and is making himself available to the various organiza-

(Continued on p. 35.)



Models and explanations of dangerous insects.

Happiness in a Handbag

H. M. TIPPETT

Don't let your handbag gather dust. Pack it often enough to do you good.

IT WAS no accident that made Wentworth Goodman in his mid-forties a prosperous merchant and man of affairs in his home town. Alert to every business advantage and prominent in every civic enterprise, he was the workingest man you ever saw. Never knew when to quit. Rest was not one of the three R's as far as he was concerned. And as for vacations—whew! you ought to hear him brag. He hadn't taken one in fifteen years. That three-hundred-yard drive you made playing golf on your last trip shrunk to nothing when Goodman began sounding off about vacations. You felt ashamed you ever set foot on the fairway.

But one morning after a late city council meeting the night before, Goodman felt a stab of pain under his breastbone. It clung for a moment or two, then subsided into a feeling of uncomfortable heaviness. It scared him enough to make an appointment with his doctor before noon. His physician examined him, and told him he had better slow down. More sleep, no heavy evening meals, fewer swivel-chair conferences in smoke-filled rooms, and more pedestrian activity in the open air were some of his recommendations. Maybe a vacation? Knowing that Goodman was allergic to the idea, the doctor only dared to query his final suggestion.

The self-elected patient felt so encouraged that he went home and got a full eight hours' sleep, the first in months. But his resolution to slow down didn't last. Habit was too strong. He prided himself on being able to provide well for his family, and he intended to see that they were assured of security before his head was covered with the snows of too many winters.

A month later a heavier and more pronounced pain frightened Wentworth Goodman into planning a week at a beach cottage. He guessed after all that he had been keeping himself under pressure too long, and he might as well be sensible about it. He raced around in last-minute arrangements. Feeling a bit dizzy after packing his bag, he lay down to wait for train time. But it wasn't the kind of rest Wentworth had planned on, for it proved to be his last long rest. Too bad he could not be around to see the many floral tributes and the wonderful things the newspapers and townspeople said about him.

Now, if this were a mystery story, the problem would be to find the culprit. But this is a common, everyday story, and there is no mystery about who was guilty. The chief reason Wentworth Goodman's demise had to be recorded at age forty-six is that he waited too long to pack his bag. At least ten years too long.

As usual, people blamed Providence for taking such a fine citizen in his prime while the old town loafer Brown lived on into his eighties. They failed to see that the moral is not that Brown deserved to live because he was shiftless, or that Goodman deserved to di young because he was good, bu rather that there are biological law we had all better respect if we war those laws to respect us. Observ them, as we live out our days i rich fulfilment of our capabilitie Disregard them, and sooner tha we or our loved ones wish, som undertaker will be quietly arrang ing a memorial service.

One of these biological laws that life must follow a rhythmi pattern. Breathing is rhythmi Walking is rhythmic. Every bea of the heart is followed by a re period. Because labour must b followed by rest, nature co operates, and night follows day Water stagnates when still, so th tides ebb and flow. Time must hav its terminals, so the moon wax and wanes.

Farms wear out unless there some rotation of crops or a fallo time for fields after several harvest The human body likewise exhaus its reserves when it is driven at to speed over a period of years.

In spite of these obvious bu

poorly observed truths, the diseases of nervous and physical wear-out increase astonishingly. And why? Perhaps too many people are letting their beautiful travel luggage gather dust in the attic or store-room. And one day they may wake up to the fact that their business success, gained at the expense of occasional outings and regular vacations, has been what the Greeks called a Pyrrhic victory. Old Phyrrhus' losses after one of his notable campaigns were so great that he couldn't afford to fight another battle. Business success gained at the expense of health is supreme folly, for such a sacrifice is unnecessary.

Intelligent people are becoming more and more educated to the three R's of physical and mental recuperation—*rest, relaxation,* and *recreation*. The three are entirely compatible.

The eight-hour day and five-day week are standard in both industry and the profession. Why, then, the increasing tension that makes so many people nervous, unhappy, and irritable? Perhaps it is because people do not know how to employ their leisure time profitably. Not having the capacity to enjoy leisure, they see no lure in a vacation handbag.

It is amazing how many people are just plain bored in their off-duty hours. Their leisure is neither recreational nor relaxing. They eat themselves into a stupor, loll around watching television by the hour, and go to work on Monday morning more tired than when they knocked off on Friday. Their forty-eight hours of opportunity to rejuvenate their vitality were wasted. They are no better off than their bosses, who keep lathered up in a fretful sixty-hour-week schedule.

Countless thousands are unaware of the meaning of zestful living. Their interests are grooved. They shrivel up in a dull daily routine.

A neighbour of mine, a sort of street philosopher who retired from active duty a couple of years ago, said the other evening after a thunder-storm, "I think that was the finest sunset I have seen hereabouts for a long time." When I agreed with him he said, "You know, it is funny how many people never see a sunset or the stars at night. When I call the attention of many of them to the beauties of the skies, they say, 'I never noticed it.' "

Such people need to pack a handbag, get away from the strain and stress of the competitive world, lie on their backs for a few evenings on the cool, white sands, of lake shore or ocean beach, and contemplate the tranquillity of the starry sky.

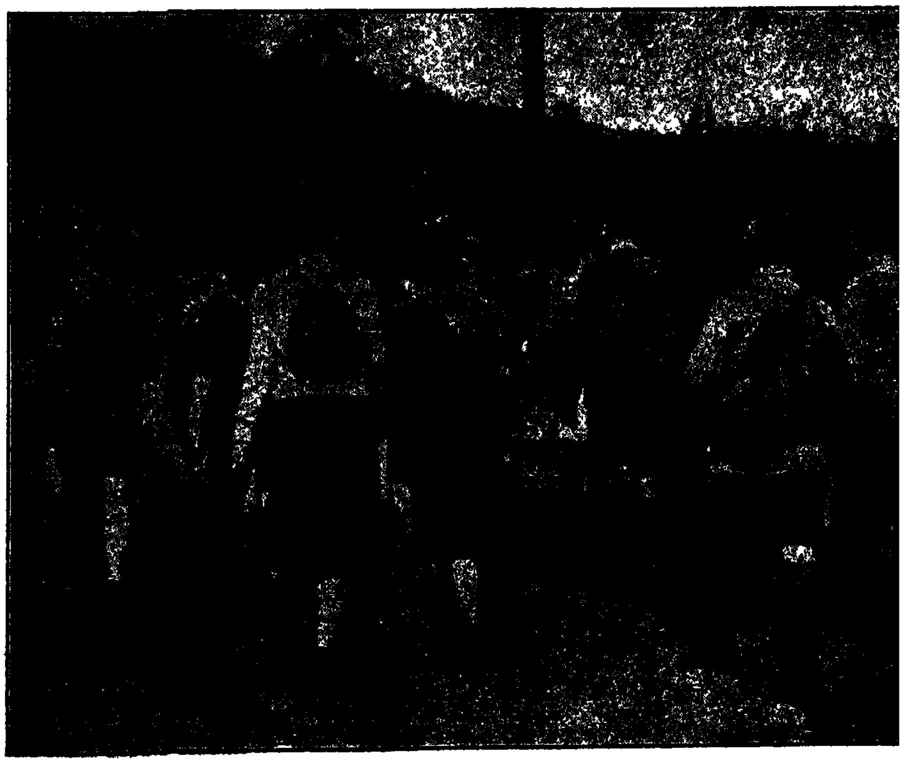
King David in Bible times witnessed such a sight when he was a shepherd boy, and it made him feel humble, for he said, "When I consider Thy heavens, the work of Thy fingers, the moon and the stars, which Thou hast ordained; what is man that Thou art mindful of him?"

A man gets his sense of proportion in balance after such an experience. He sees the tragedy of exalting the rupee sign as the supreme symbol of value. He loses health and the finer things that minister to personal culture and appreciation of the world around him. Then, often too late, he comes to understand that material success can be expendable.

If a man prides himself on the number of phones on his business desk, he had better rent a mountain cabin at least once a year and hie himself to a spot where there aren't any phones. If his wife has been doggedly following the soap-box operas on radio or television each day, she had better leave her portable set behind when she departs for seashore or mountain. There are symphonies in the dashing waves on a rock-bound coast or in the wind-blown trees of a mountainside that she probably has not heard in years.

To be awakened by the matins of the birds instead of the jangling

(Continued on p. 21.)



Let's pack our bags often enough to do us good.

Health Is Worth an Effort

EDOUARD BROCHU, Ph.D., L.S.A.

AT THE last International Congress of Physicians someone said that laziness is the main cause of disease. Sloth, the neglect of physical exercise, leads to malnutrition. A daily ration of yogurt requires little effort but greatly improves your diet and protects the body against numberless invisible foes.

More than ever yogurt is a must for adequate nutrition. With the increasing popularity of anti-biotics as components in food, chewing gum, and tooth-paste, beneficial bacteria are often killed or at least weakened to the point of being unable to keep up their normal trend of reproduction or uphold their post as security agents. Then their place is taken by harmful bacteria. They cause intestinal disturbances and produce harmful substances whose effects pervade the body.

Yogurt is a fermented milk cultured with the most powerful lactic bacteria. The studies of Dr. Seneca and his associates of Columbia University reveal that yogurt exerts considerable effect on harmful bacteria. This is but one of the numerous advantages obtained from yogurt.

Yogurt is an ideal food for health. It is one of the most complete foods, nourishing, easily digestible, a generous provider of proteins, lactose, fats, minerals, lactic acid, and vitamins.

After a substantial meal yogurt is the logical dessert. No sooner is it eaten than it takes away drowsiness, the usual after-effect of a hearty meal.

Yogurt is particularly recommended for aged persons, convalescents, and those who suffer from gastric distress, dyspepsia, or difficult digestion.

Yogurt is the ideal food for mothers. Often expectant mothers can hardly tolerate their food at a time when they need it most. Mothers with children will also find yogurt a useful food. It contains all the proteins, vitamins, minerals, fats, and lactose found in milk in a highly digestible, assimilable form.

Yogurt is highly advisable for children. It affords all the food value of milk in an easily digestible form.

The preparation of yogurt is easy and economical. Any housewife can prepare it as easily as a cake. All she needs is good milk, a culture of yogurt, and an ordinary



saucepan. The preparation consists essentially in boiling milk, cooking it to 118° F. inoculating it with one ounce of culture, pouring it into jars, incubating it until a firm curd is obtained, and finally placing the jars in the refrigerator. This preparation is not much more expensive than milk, since with but one culture as much yogurt as desired can be made for a month or so.

There are many ways of eating yogurt. It can be eaten as soon as cooled. It has a flavor of hazelnut, a delicate aroma, and the consistency of a pudding. Many yogurt consumers prefer to eat it straight; others not initiated to its tarty taste eat it as a topping for fresh fruit or sweetened with honey or molasses.

Made into a sundae with maple syrup it is particularly delicious. Other persons prefer yogurt seasoned with salt and chives, chopped green onions, or fresh herbs. It is rapidly gaining popularity as a dressing for fruit and vegetable salads, both because of its milk taste and its low calorie content. Made into a sherbert with raspberries, strawberries, or grated pineapple, it becomes a delicious dessert; its nutritive value is unimpaired by freezing.

Excellent beverages can be prepared by mixing equal parts of yogurt and orange juice, pineapple juice, or almost any other fruit juice. Many people enjoy it merely stirred to a liquid and drunk as buttermilk. Each person soon discovers his favourite way of eating yogurt.

—The Herald of Health, January [illegible]

Pains and Grains

OWEN S. PARRET, M.D.



Deficiency eating is responsible for much of the aches and pains.

[illegible] came into my office [illegible] for consultation a [illegible] seventy-nine-year-o l d [illegible] She complained of pain in [th]e legs involving the sciatic nerves [a]nd obscure pains in other parts of [h]er body. No one likes pain, of [c]ourse, and this woman was no ex[c]eption. A doctor is supposed to give [e]very pain a name, so I followed [th]e rule and named it neuritis [w]hich means inflammation of a [n]erve trunk. The next thing was to [fi]nd a cure. But I hadn't found the [c]ause yet, which any good doctor [sh]ould do.

We expect a car to squeak and [ra]ttle a bit after 75,000 miles. A [fr]iend of mine recently told me [th]at he drove one of his cars [1]00,000 miles, and although it still [ra]n well, finally sold it because it [lo]oked a bit out of date. Of course [h]e had given it some attention to [ge]t such good performance.

I wondered how much thought [th]is good woman had given to her [di]et programme. Although neuritis [m]ay have several causes, lack of [vi]tamins, especially the B complex, [is] of paramount importance.

I said to her, "What kind of [br]ead do you eat?"

She replied, "White bread."

"Oh," I said, "you need bread [m]ade of the entire grain freshly [gr]ound."

"I don't like dark bread," she [sa]id, but she admitted that neither [di]d she like her nerve pains.

I said, "What kind of cereal do [yo]u like?"

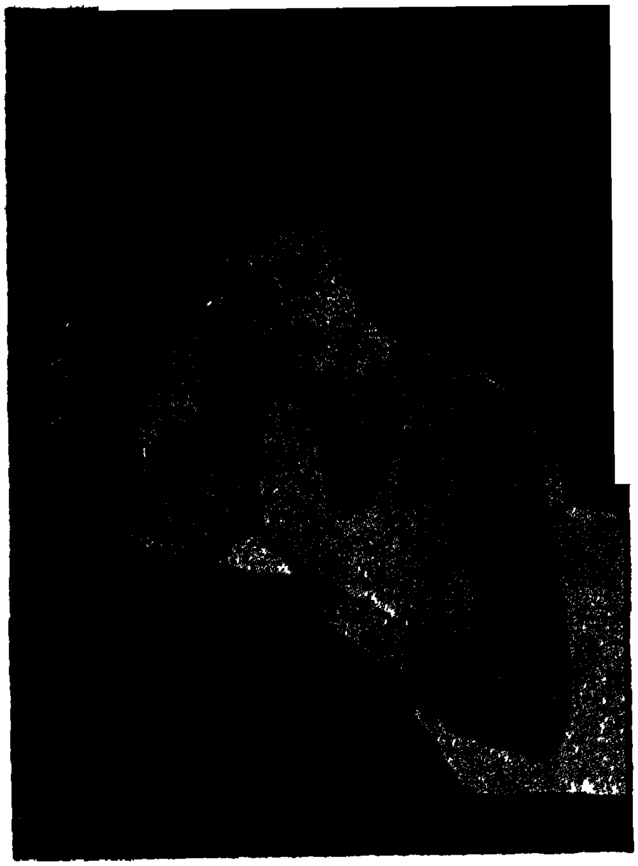
She replied, "Cream of Wheat."

I told her where she would find [a] health store selling real *cream* of [w]heat, made of 15 per cent germ [an]d 85 per cent middlings (called [b]y millers the scalp of the [shor]tings). This is usually fed to [ca]lves and pigs, but, oh, how they [d]o grow on it. So far as I know [th]ey never complain of nerve [pa]ins. In human beings nerve [pa]ins often are as bad as Old [Mac]Donald's farm, with here a [pa]in, there a pain, and everywhere a pain. When I finished quizzing her I found that she had almost no vitamin B in her diet. I marvel at the ability of the human body to stand up to the abuse we heap on it by removing from our foods most of the minerals and vitamins God put into them. Lower animals eagerly devour the entire foods and thus get them. We feed the best of foods to our domestic animals but give our babies and little tots white-flour products and sugar, until they are ready for false teeth by the time they are grown.

I visited a bakery not long ago. I asked the proprietor if he had any baked goods for sale made of the entire grain of any cereal. He did not. We both agreed that the sugar-and-white-flour products that filled his showcases were unfit for food. When I asked him why he didn't get a small mill and grind his own flour for bread, using all the grain, he replied that he had to bake what people wanted or he could not make a living.

Deficiency eating is responsible for much of the aches and pains we doctors hear about each day in the

(Continued on p. 32.)



Dizziness is a symptom of some underlying disturbance in the human body.

DIZZINESS

EDWARD PODOLSKY, M.D.

Dizziness is an indication—a symptom—of disorder, not a disease itself.

THERE are many aches, pains, and discomforts that afflict most of us. Among the most common is dizziness. I can think of no one who has never complained of having felt dizzy at one time or another. Dizziness is described variously by different people: faintness, unsteadiness, rocking, staggering, backward-swaying, waviness, giddiness, unsureness. There are various degrees of dizziness, but on the whole the feeling is that of a turning sensation.

Dizziness is not a disease in itself; it is a symptom of some underlying disturbance in the human body. The ailment may be slight or quite serious, and for that reason every physician always makes a thorough investigation to discover the source of the dizzy sensation.

Doctors have a technical name for dizziness. They call it vertigo, but it is dizziness just the same. Vertigo, or dizziness, may be caused by brain tumour or epilepsy. People suffering from migraine headaches frequently complain of some degree of dizziness.

The excessive use of tobacco and alcohol may cause dizziness. Various industrial gases and many noxious agents can result in dizziness. The habitual use of drugs, such as the barbiturates (sleeping pills), quinine, streptomycin, aspirin, can quite easily result in attacks of dizziness.

Dizziness in an aged person is frequently due to hardening of the arteries. When the dizziness appears and disappears suddenly, it may be due to a spasm of a blood vessel in the brain. Patients with high blood pressure of many years' duration often complain of dizzy spells.

Psychosomatic dizziness occurs in anxiety states, hysteria, neurasthenia, and various nervous upsets. Injury to the head may result in dizziness and it is due to brain injury. Anæmia may result in dizziness, and women undergoing change of life frequently complain of dizziness.

Some people note that they have dizzy spells when they are angry or feeling hostile, probably caused by a sudden increase in the blood pressure, brought on by the intense emotion they are experiencing. Others may suffer from dizzy spells when they are tired—probably decreased blood pressure. Others obtain relief from dizzy spells by lying down. Their dizziness may be due to some inner-ear disturbance.

There is obviously no one treatment for all cases of dizziness. The cause of the dizziness must always be found before anything can be done for it. Where the dizziness is caused by wax in the ears, the removal of the wax will cure the dizziness at once. Where the dizziness is caused by the excessive use

of alcohol or tobacco, eliminating the cause will bring about pronounced improvement almost at once. In dizziness due to nervous upsets, psychotherapy at the hands of a psychiatrist will cause the dizzy spells to abate. When anyone experiences dizzy spells over a protracted period, it is always desirable to seek medical aid. It is important to seek a doctor, because dizziness is not a disease in itself but a symptom of a disturbance of some kind, either slight or quite serious. In general, the earlier the cause of the dizziness is determined, the better the results.

The doctor has many tests at his disposal to find the cause and origin of the dizzy spell. He has tests for hearing and for equilibrium, as well as X-ray and various laboratory tests. By means of these, the examining physician can obtain a good idea as to the cause of dizziness.

Fortunately modern medical science is highly successful in treating dizziness. Dramamine is used with success in many cases of dizzy spells. It can be used to prevent dizzy attacks associated with motion sickness, such as sea sickness and air sickness.

Where dizziness is due to high blood pressure, a salt-free diet is of value. For hardening of the arteries, in which condition dizzy spells are frequent, a low-fat, low-cholesterol diet is helpful. The use of nicotinic acid, pyrodoxine, and other vitamin products is often helpful in vertigo, or dizziness.

In anæmia complicated by dizzy spells, the building up of the blood with proper diet will alleviate not only the anæmia but the dizzy spells as well. In low blood pressure, measures directed toward increasing the blood pressure by diet, rest, and other hygienic measures will also result in a disappearance of the dizzy spells.

Correction of visual defects by means of glasses has been known to abolish dizzy spells. Patients with low blood sugar benefit greatly when put on a higher protein diet, which raises the blood-sugar level.

When dizzy spells are caused by an occupation that brings exposure to unhealthful fumes, changing to a different occupation will bring an end to these attacks.

When the underlying cause of the dizziness is an abscessed tooth, removal of the tooth will result in marked improvement. The same is true when diseased tonsils or a diseased gall-bladder are removed. When the sinuses are responsible for the attacks, treatment directed toward clearing up the sinus infection will definitely bring an end to the dizzy spells.

The functional types of dizziness, caused by nervousness in one form or another, require changing the way of living. This calls for cutting down on excesses of all kinds, for reducing the tendency to rush about in doing daily tasks, for cultivating a calm mind and a philosophical attitude, for being at peace with others and with yourself. It requires emotional and spiritual stability. It requires an abiding faith in the dignity of the human being and in humanity. Most of all, it requires the courage to live as a socially useful person, with a will to solve any problem as it comes along without becoming emotionally upset.

When a person is faced with the necessity of overcoming a physical difficulty he learns how much character it takes to regain health. It would be well to consider this early.

HOW TO GET A GOOD NIGHT'S SLEEP!

Elva Barretta

WHILE visiting the world's largest city recently, I was attracted to the windows of Lord and Taylor, one of Fifth Avenue's most beautiful stores. Usually these windows are devoted to displaying glamorous and beautiful garments, but not this time. They were devoted to selling just one thing: a good night's sleep and, incidentally, bedding.

Some of the tips for insomniacs are worth passing along.

The first and most obvious requisite is to go to bed. We can't hope to fall asleep while on our feet. It is best to go to bed in a large, comfortable bed in a setting of restful colour.

Keep a level head. Don't prop yourself up on a hard pillow.

Turn down the lights.

Make your mind a blank.

If your mind won't stop working, concentrate on one idea. Read a dull book.

Let the cats in. Watch their eyes squint as they open their mouths in a long, drowsy yawn, and you also will begin to feel relaxed.

Count something. Try counting black butterflies on black velvet.

Take a warm bath.

Move to the country.

Repair the leaky faucet.

Try gentle exercise.

Have a massage.

Sleep with a background of soft music.

The last idea was "Give the baby away!" And there in the window was a darling baby girl dressed in pink from curly head to twinkling toes, complete with bonnet, in a little pink basket.

SALK VACCINE

A Progress Report

Part I

Although research in new poliomyelitis vaccines continues, the present serums have proved more effective and longer-lasting than anticipated.

MARGUERITE CLARK

IN THE damp, rainy summer of 1916, a mysterious epidemic swept over the northeastern part of the United States. Some 27,000 people, mostly children, were victims of a crippling disease called infantile paralysis. More than 6,000 died.

Many of the attacks started with a severe inflammation of the throat, bronchial tubes and lungs. "It is clear that the germ probably has originated from the long period of damp weather and has spread rapidly," a leading New York doctor commented. "The only means of eradication is sunlight." So thousands of desperate parents tried to escape the dangerous "germ" by leaving the city with their children, only to encounter similar epidemics in sunny rural or seaside communities.

Even in 1916 infantile paralysis or poliomyelitis (inflammation of the gray matter of the spinal cord), was not a new ailment to research scientists. Egyptian skeletons of 3700 B.C. had revealed bone structures suggesting the crippling after-effects of the disease. In 1784 German and Swedish scientists had first officially described the now-familiar symptoms. In 1908 Dr. Karl Landsteiner, the Austrian researcher, had made the first successful transmission of infantile paralysis from the spinal cord of human victims to a laboratory monkey. In the United States, Dr. Simon Flexner, later to head the Rockefeller Institute of Medical Research, had proved that the human disease could pass from one monkey to another.

In a few obscure laboratories in the United States preliminary studies had been started by small groups of poliomyelitis researchers. However, funds were scarce and until the disastrous epidemic in 1916, the public was apathetic. After that, each year from June through September, infantile paralysis struck with increasing strength in any or all sections of the *nation. No one could predict when, where, or how severe the attacks would be. Quarantine did not help. Closing schools, churches, and theatres, failed.* Special nutrition programmes and child health plans were futile. Many of the best fed, most carefully reared youngsters were among the victims. In no other disease had American mothers and fathers so great an interest and dread.

For permanent protection against infantile paralysis, a child must develop in his own blood enough of the substances called antibodies to fight the polio germ. So even in 1916, the goal of the scientists was to find a vaccine similar to that used against smallpox, yellow fever, and diphtheria, that would create long-lasting immunity against poliomyelitis.

It took 40 years, many millions of dollars and the dedicated interest of thousands of unnamed basic researchers to complete this search. In 1956, pediatricians can assure anxious parents that it is possible to protect their children—safely and permanently—against the ravages of poliomyelitis. "The next generation may be as free of paralytic polio as today's generation is free of smallpox," said Surgeon General Leonard Scheele of the *U. S. Public Health Service: "The paralytic attacks among children who have received even one shot of* the Salk vaccine have been 67 to 90 per cent lower than in unvaccinated children."

The first signs of a clear-cut victory against infantile paralysis came late in 1952, during the worst epidemic in history. There were more than 55,000 victims. Up to then, the scientists had but a few meagre facts about the cause of the creeping gray sickness. They knew that poliomyelitis is caused by one of the smallest of all viruses—a spherical-shaped organism so small (1/1,000,000th of an inch in diameter) that even today only a few have been isolated and photographed in laboratories.

When these viruses infect the tissues of the brain and the spinal cord, they kill many of the motor nerve cells which furnish energy to move the muscles of the body. Once they are destroyed completely the body cannot create new cells to take their place so the affected muscles lose their working ability. In this small virus, there are several types of the disease, each independent in its action and each immune to but one type of poliomyelitis.



U.S.I.S.
Dr. Jonas E. Salk helped in the vaccination of children with his famous vaccine.

'ust how many types there were, 10 one knew.

In 1948 the National Founda-ion for Infantile Paralysis estab-ished a long-term programme to est, check, and compare the many elated viruses. Heading the teams vere Dr. John F. Kessel of the Jniversity of Southern California,)r. Herbert A. Wenner of the Jniversity of Kansas, Dr. Louis P. Gebhardt of the University of Utah n d, at the University of 'ittsburgh, a dark dynamic young acteriologist, Dr. Jonas E. Salk. After three years of intensive work, t the cost of $1,190,000 in March f Dimes funds (small voluntary ontributions to the National 'oundation), the groups reported hat all polio viruses fell into three ypes: *Brunhilde,* named for an noculated chimpanzee in a Balti-nore laboratory, *Lansing,* for a oung man in Lansing, Michigan, vho died of the disease, and *Leon,* or a Los Angeles boy-victim of oliomyelitis.

The symptoms of the infection caused by the three types were all the same, but infection by one strain would not protect a patient from the other two. Any vaccine, to be effective against poliomyelitis, would have to protect against all three types. Otherwise the disease might strike the same person three times.

In 1952 polio research was centred on two kinds of vaccine—one made with live polio virus and the other with killed or "inactivated" virus, powerless to infect the body but still enough to help it manufacture antibodies against the disease. Of all the experimental vaccines tested by the National Foundation experts, the one made of killed virus by Dr. Jonas Salk at his big Pittsburgh laboratories seemed the most promising.

During his work on the virus-typing programme the modest young scientist had investigated the new Enders method of growing polio viruses in test tubes. For many years scientists had had to grow the virus in nerve cells of monkeys, an expensive and time-consuming process. This problem was solved by Dr. John F. Enders of Harvard University, another brilliant bacteriologist, who succeeded in growing the viruses in test tubes.

This process, which in 1954 brought the Nobel Prize to Dr. Enders and his young associates, Drs. Thomas Weller and Frederick Robbins, helped Dr. Jonas Salk to prepare his now widely known vaccine inexpensively and rapidly. Mincing tissues from monkeys' kidneys, Salk and his assistants put the mixture in test tubes with a special nutrient solution, then added dead polio virus. As the virus multiplied enormously they gathered the crop, purified it, exposed it to formaldehyde to inactivate the live virus. The Salk vaccine was a polyvalent; that is, it contained all three strains of the polio virus—Brunhilde, Lansing and Leon. And it was potent and safe.

For many months, Dr. Salk and his assistants tested the vaccine on monkeys and chimpanzees. When hundreds of animal tests had assured them that the preparation was both harmless and effective, they made a few tests on children who already had recovered from polio. In every case, the blood tests were favourable. The vaccine either increased the amount of antibodies the children already possessed, or it built up new supplies. In March 1953, some two years after starting his studies, Dr. Salk reported on the vaccination of 160 Pittsburgh children and adults, including his three young sons. None had suffered harmful side effects. Blood samples, in all cases, showed that the new vaccine had stimulated the production of enough antibodies to neutralize all three types of polio. From all signs, American medicine had a successful polio vaccine.

(To be Concluded.)

Stimulants and Narcotics

PART II

ELLEN G. WHITE

"WINE is a mocker, strong drink is raging; And whosoever is deceived thereby is not wise."

"Who hath woe? who hath sorrow? who hath contentions? who hath babbling? who hath wounds without cause?

Who hath redness of eyes?

They that tarry long at the wine;

They that go to seek mixed wine:

Look not thou upon the wine when it is red,

When it giveth his colour in the cup,

When it moveth itself aright.

At the last it biteth like a serpent,

And stingeth like an adder."

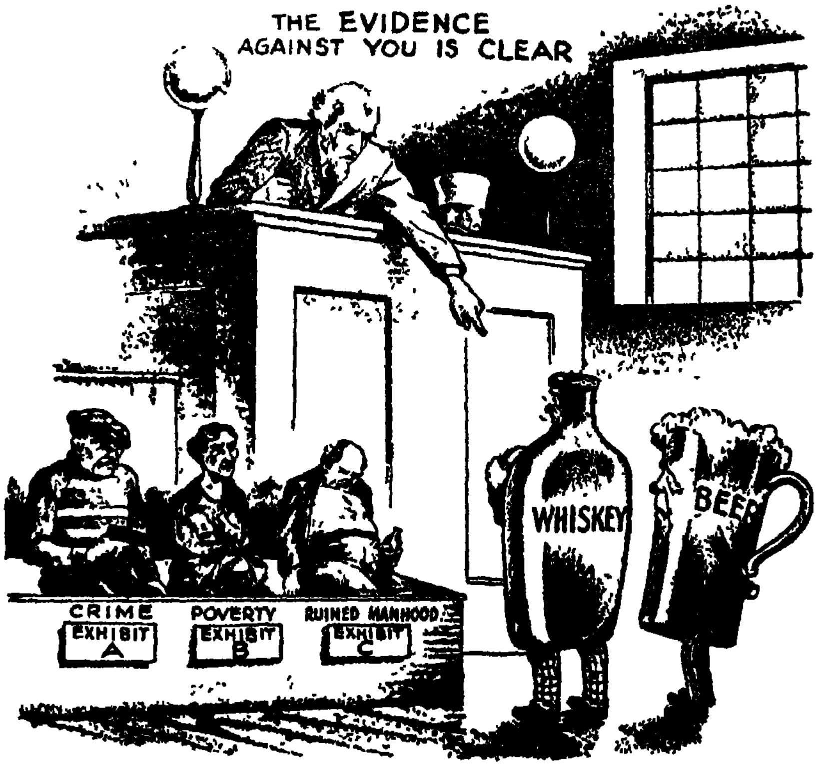
Never was traced by human hand a more vivid picture of the debasement and the slavery of the victims of intoxicating drink. Enthralled, degraded, even when awakened to a sense of his misery, he has no power to break from the snare; he "will seek it yet again."

No argument is needed to show the evil effects of intoxicants on the drunkard. The bleared, besotted wrecks of humanity—souls for whom Christ died, and over whom angels weep—are everywhere. They are a blot on our boasted civilization. They are the shame and curse and peril of every land.

And who can picture the wretchedness, the agony, the despair, that are hidden in the drunkard's home? Think of the wife, often delicately reared, sensitive, educated, and refined, linked to one whom drink transforms into a sot or a demon. Think of the children, robbed of home comforts, education, and training, living in terror of him who should be their pride and protection, thrust into the world, bearing the brand of shame, often the hereditary curse of the drunkard's thirst.

Think of the frightful accidents that are every day occurring through the influence of drink. Some official on a railway train neglects to heed a signal, or misinterprets an order. On goes the train; there is a collision, and many lives are lost. Or a steamer is run aground, and passengers and crew find a watery grave. When the matter is investigated, it is found that some one at an important post was under the influence of drink. To what extent can one indulge the liquor habit and be safely trusted with the lives of human beings? He can be trusted only as he totally abstains.

Persons who have inherited an appetite for unnatural stimulants



ld by no means have wine, r, or cider in their sight, or thin their reach; for this keeps e temptation constantly before hem. Regarding sweet cider as harmless, many have no scruples in purchasing it freely. But it remains sweet for a short time only; then fermentation begins. The sharp taste which it then acquires makes it all the more acceptable to many palates, and the user is loath to admit that it has become hard, or fermented.

There is danger to health in the use of even sweet cider as ordinarily produced. If people could see what he microscope reveals in regard to he cider they buy, few would be willing to drink it. Often those who manufacture cider for the market are not careful as to the ondition of the fruit used, and he juice of wormy and decayed pples is expressed. Those who would not think of using the poisonous, rotten apples in any ther way, will drink the cider made from them, and call it a uxury; but the microscope shows hat even when fresh from the ress, this pleasant beverage is wholly unfit for use.



Intoxication is just as really roduced by wine, beer, and cider, s by stronger drinks. The use of hese drinks awakens the taste for hose that are stronger, and thus he liquor habit is established. Moderate drinking is the school in which men are educated for the runkard's career. Yet so insidious the work of these milder imulants that the highway to runkenness is entered before the ictim suspects his danger.

Some who are never considered eally drunk, are always under the nfluence of mild intoxicants. They re feverish, unstable in mind, unalanced. Imagining themselves ecure; they go on and on, until very barrier is broken down, every rinciple sacrificed. The strongest esolutions are undermined, the ighest considerations are not sufficient to keep the debased appetite under the control of reason.

The Bible nowhere sanctions the use of intoxicating wine. The wine that Christ made from water at the marriage feast of Cana was the pure juice of the grape. This is the "new wine found in the cluster," of which the Scripture says, "Destroy it not; for a blessing is in it."

It was Christ who, in the Old Testament, gave the warning to Israel, "Wine is a mocker, strong drink is raging; and whosoever is deceived thereby is not wise." He Himself provided no such beverage. Satan tempts men to indulgence that will becloud reason and benumb the spiritual perceptions, but Christ teaches us to bring the lower nature into subjection. He never places before men that which would be a temptation. His whole life was an example of self-denial. It was to break the power of appetite that in the forty days' fast in the wilderness He suffered in our behalf the severest test that humanity can endure. It was Christ who directed that John the Baptist should drink neither wine nor strong drink. It was He who enjoined similar abstinence upon the wife of Manoah. Christ did not contradict His own teaching. The unfermented wine that He provided for the wedding guests was a wholesome and refreshing drink This is the wine that was used by our Saviour and His disciples in the first communion. It is the wine that should always be used on the communion table as a symbol of the Saviour's blood. The sacramental service is designed to be soul-refreshing and life-giving. There is to be connected with it nothing that could minister to evil.

(Continued on p. 29.)

What Do You Resent?

HAROLD J. HOXIE, M.D.

You can command any situation if you remain serene—and you will live longer.

DOES it irritate you when someone deliberately obstructs your path, cheats you, or belittles you? If so, you are perfectly normal. It is easier for you to meet and overcome obstacles if you are somewhat aroused. You won't accomplish much if you never become angry. Don't be too angry, though, for anger out of proportion to the needs of the situation will deprive you temporarily of your reason. Then you may be unable to regulate your words or conduct, though of course you are still responsible for the consequences.

Anger is like heat in an automobile engine. The engine runs inefficiently when cold, smoothly when reasonably warmed up But if it gets too hot, the engine is injured, the valves warp, the pistons stick, the bearings burn out, and vapour lock stops the fuel supply.

You may rarely become acutely angry; but are you sure you do not unknowingly carry resentment? Like anger, resentment is a feeling aroused by brooding over threats to your physical welfare, your financial security, or your reputation. Resentful thoughts or feelings can bounce around inside your mind until you are unable to concentrate on the main issues of life or to cope with the threats that aroused your resentment.

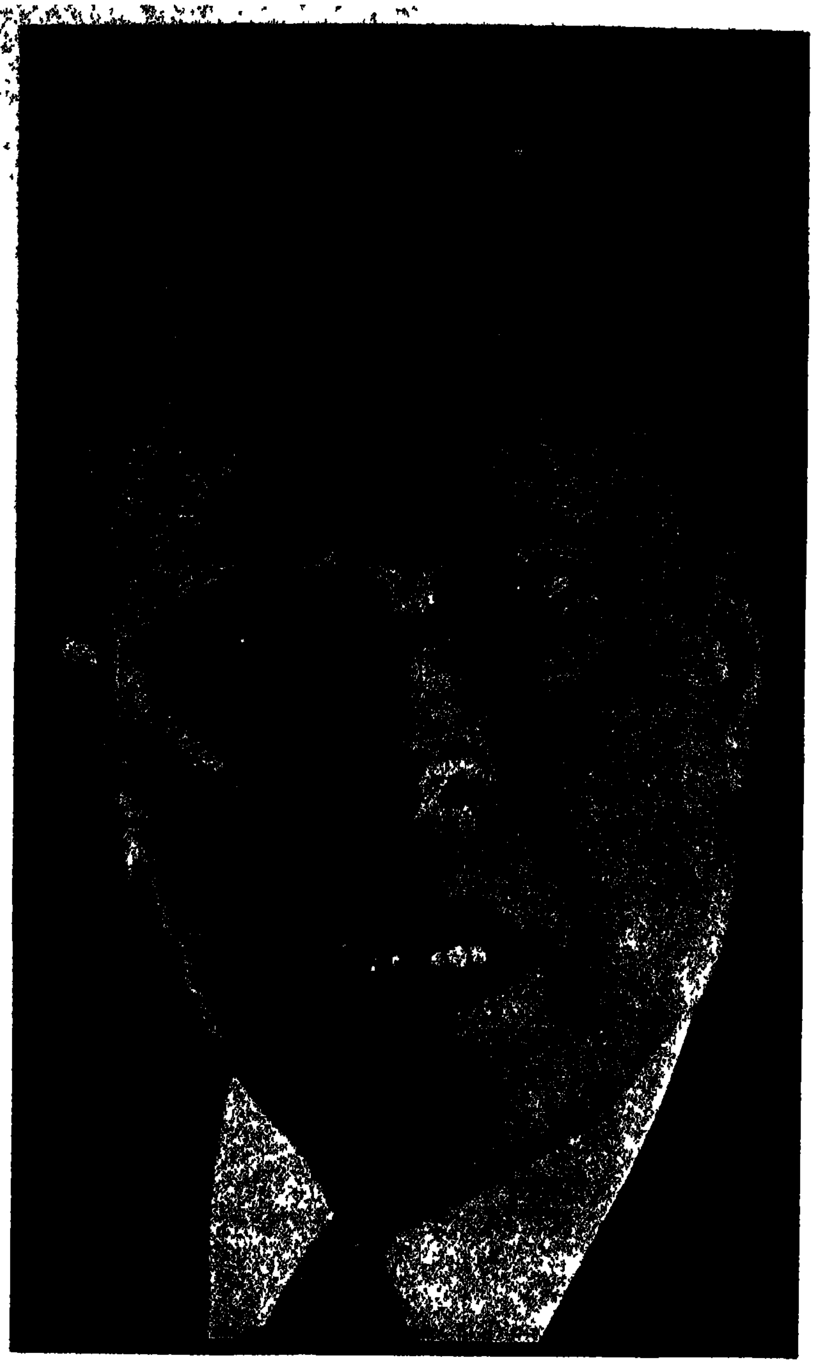
The effects of habitual resentment are felt in all parts of the life. Resentment makes a person intolerant not only of failings and frailties in others but also of his own imperfections. It suppresses the sense of humour, makes it difficult to sympathize with others, and stirs up doubts about the sincerity and good will of others. Thus the maintenance of polite and conventional relationships with others becomes costly in terms of anxiety, and the enjoyment and efficiency of work is decreased. The resentful person is bored by a little monotony, tired by a little work, or exhausted even before work begins.

Resentful feelings produce physical disease. For example a young woman became angry at her fiance because of his attentions to someone else. She kept her resentment to herself, but it showed up in recurring spells of vomiting, for which no organic cause could be found. Other digestive disturbances that may result from resentment are so-called gas pains, constipation, spells of diarrhœa, and even inability to swallow food.

High blood pressure in its early stages is often caused by suppressed resentment. A man in his late twenties continued working in his father's retail store because of a sense of loyalty and duty. When he went to his physician, complaining of throbbing headaches on awakening in the morning, he was found to have high blood pressure. He admitted having a good deal of previous unexpressed resentment because his father had not treated him as an adult. In the course of the next six months he worked out a reasonably friendly separation and set up his own business. Shortly thereafter his blood pressure was found to be normal.

Skin eruptions and hives may be caused and aggravated by resentment. This appears to be especially true of situations in which the person is trapped by his sense of obligation. A conscientious middle-aged merchant went to his physician because of a weeping eczema on his neck, trunk, and arms. The eruption appeared shortly after his company went bankrupt. His partner in business, who had made some unwise deals that brought on the bankruptcy, refused to share the responsibility for satisfying the demands of their creditors.

Headaches, neckaches, shoulder and arm pains, and backaches are frequently caused by sustained



High blood pressure in its early stages is often caused by suppressed resentment.

nuscle tension, which is a part of .he physical reaction accompany-ng resentment.

What are some of the causes of 'esentment? It has been said that ife isn't a little bundle of big hings—it is a big bundle of little hings. It is our little thoughts that nake us what we are. They letermine our facial expressions and the place where the permanent wrinkles form. So it is likely that the tendency you may have to react to situations with too much resentment was developed as a result of many little things.

Observe the behaviour of parents and small children in public places as well as in their homes. Notice what irritates the children. It will give you a better understanding of your own reactions to situations.

The things you resent now are not much different from those you resented as a child. You resent the necessity of postponing satisfaction of your wants. You resent encroachment on your time, interference with what you want to do. You resent deadlines, dull routine, and authority if there was premature emphasis on work at the expense of normal reactions in your childhood and youth. You resent others' not carrying their part of the load.

You resent resentful behaviour in others. Resentment may take the form of reproach, belittling, scornful reproof, harsh discipline, or simply failure to express affection and esteem. You may have developed habitual resentfulness because of the example of one or both of your parnts. You may resent a person whom subconsciously you have set up as a substitute for someone you resent.

The deep-seated attitude that makes us touchy is a seemingly illogical but extremely common combination of pride, vanity, or conceit, with feelings of inferiority or unworthiness. This is a delicately balanced attitude. When, like the two parts of the atomic bomb, the two conflicting parts of this attitude are forced together, an explosion results in the form of anxiety or anger.

It is this unstable attitude that makes us so fond of and dependent upon applause, and so suspicious of and sensitive about the opinions of others. It makes us resent any questioning of our actions and any counsel or advice. Thus we deprive ourselves of help from those who wish us well.

This attitude also makes us critical and resentful of ourselves. It forces us into a perfectionistic, over-conscientious way of life, in which we take everything too seriously. When we are unable to live up to our high opinion of ourselves, our low opinion of ourselves

(Continued on p. 28.)

Why Have Your Eyes Examined?

JESSE M. LEVITT, M.D., F.A.C.S.

You can keep a step ahead of visual ills by having an eye examination regularly.

ONE would think it unnecessary to emphasize the importance of healthy eyes and good eyesight, and the tragedy of irreversible blindness. Yet too many people neglect their eyes and wait until they have an advanced stage of eye disease before seeking proper medical advice.

Some consider only the question of eye-glasses in relation to eye trouble, failing to realize that eye symptoms may be a signal of ocular or general disease. Too many people still go to the chemist shop for treatment of eye disorders, or regard anyone who handles or sells glasses as a fit person to give a competent eye examination.

Great strides have been made in ophthalmology—that branch of medicine which deals with the eyes—toward the cure of eye diseases and the prevention of blindness. It is a pity that the public does not take full advantage of these benefits, which are available to all, rich and poor alike. Where eyes are concerned, the result of negligence and ignorance is often tragic. By the time many cases reach the attention of an eye physician they can no longer be helped, because it is too late to restore lost eyesight, or very often too late to save what remains.

A thorough examination of the eyes should be given by an eye physician. The mere examination for glasses is not sufficient to protect the health of the eyes. In fact, glasses may give perfect vision, yet the eyes may be affected with a most serious illness.

The eye physician is trained to diagnose and treat disease, whether it is limited to the eye itself or involves other parts of the body. He uses "drops" for diagnosis and treatment, and is able to perform eye operations when required. He prescribes glasses when they are necessary. In common with all other reputable physicians, he does not advertise.

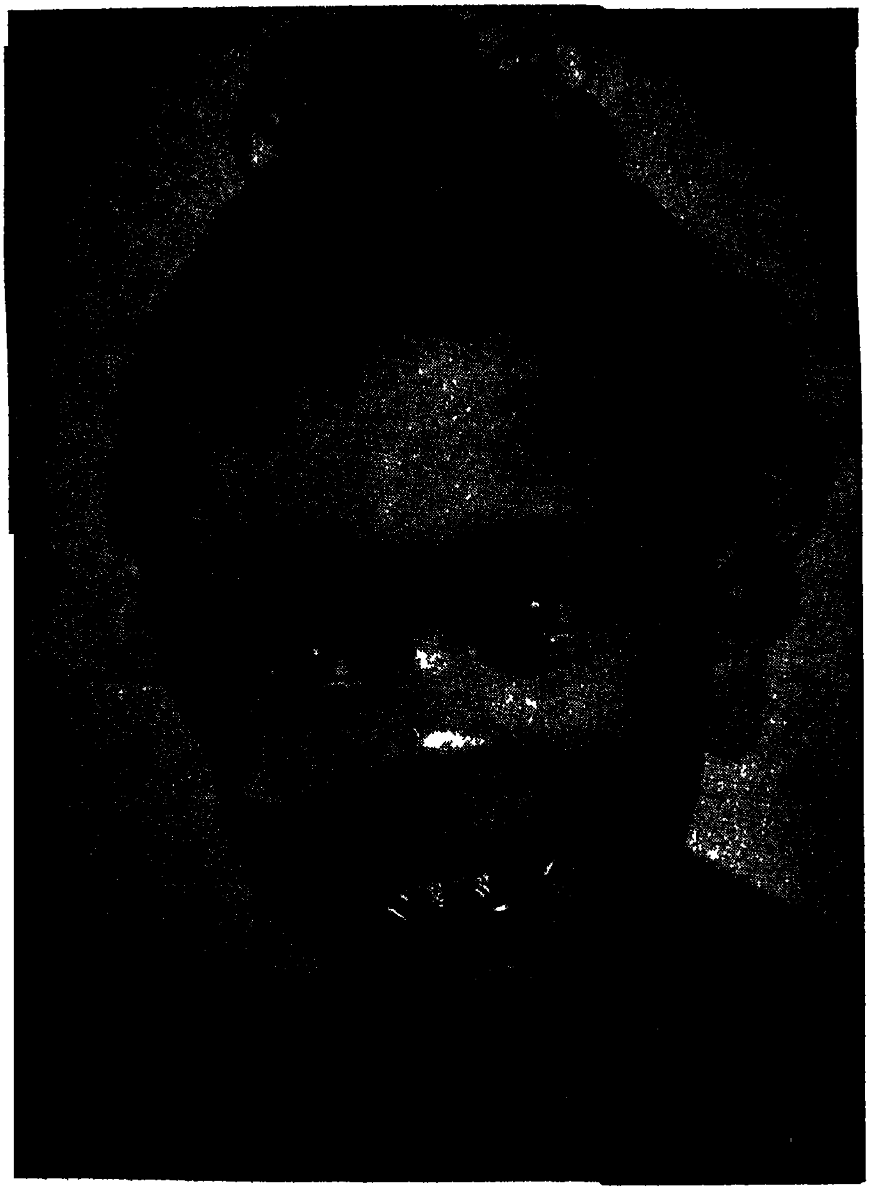
Most people are well acquainted with the eye as a seeing mechanism, which functions much like a camera. For this reason we shall not discuss here various optical defects such as far-sightedness, near-sightedness, and astigmatism, which are due to faulty shape of the eyeballs. These conditions can be corrected by proper glasses.

To understand the importance of a medical eye examination, one must know something of the structure of the eye and its relation to the rest of the body. It is a living organ, composed of tissues, blood vessels, and nerves, just as is the heart, the liver, or the kidneys. It lies in a bony cavity—the orbit—which is close to mouth, nose and sinuses. It is like a ball, at the back of which is a stalk-like structure, the optic nerve, which connects it with the brain. The front of the optic nerve—the part attached to the back of the eyeball—spreads out into nerve fibres forming the inner layer of the eye, the retina, upon which sight is registered. The back of the optic nerve extends into the head, and, much like a telephone system, has connections that relay its messages to the back of the brain, where the recognition and interpretation of sight occur. The blood vessels in the retina are a direct continuation of the blood vessels of the brain, and are basically similar to the arteries and veins in every other organ of the body.

The eye is a good indicator of

general health, for it is often affected by general bodily diseases, such as diabetes, tuberculosis, and syphillis. It is the only part of the body in which blood vessels can be seen directly. When the physician looks through the pupil of the eye with an instrument called the ophthalmoscope, he sees the retina, the optic nerve, and the retina blood vessels (called the fundus, or eye ground). Abnormal changes in the fundi are most often the result of bodily illness, and for this reason the eye doctor is sometimes the first to discover the presence of general disease. The appearance of the blood vessels in the eye may be a key to the condition of those throughout the body.

Hardening of the arteries (arteriosclerosis), high blood pressure, heart disease, and kidney disorders may be detected in the eye grounds. In addition, diseases of the brain, notably brain tumours, and disorders of the nervous system frequently betray their presence through abnormalities in the optic nerve and the retinal blood vessels. Eye changes in pregnancy may give warning of an impending complication and often help in diagnosing a difficult case. Thus it is often possible by an eye examination to detect the early stages of many general diseases, sometimes even before they begin to cause symptoms in other parts of the body, and to initiate the early treatment, so invaluable in the fight for life and health.



Vidyavrata

Only the eye physician is trained to diagnose and treat disease, whether it is limited to the eye itself or involves other parts of the body.

Headache is a common complaint. If caused by eye-strain, it can be relieved by suitable glasses. However, it is easy to see that disease of the nearby parts—the brain, teeth, nose, throat, and sinuses—as well as any number of general disturbances—simple stomach upset, high blood pressure, or acute appendicitis—may be the underlying cause of headache. Glasses would be a sheer waste of money and a danger in delaying correct diagnosis and treatment when the cause is not in the eyes. Only an eye physician can judge whether the eye is primarily at fault. If it is not, he can give proper guidance for tracing the true cause.

Many inflammatory eye diseases, especially those of the front of the eye (the cornea and the sclera), and the coloured part of the eye (the iris), are infections carried through the blood stream from some other place of disease. Diseased tonsils and teeth, sinusitis, and infections, such as tuberculosis and syphilis, may be the source of eye infections. It is obviously essential to treat the source of infection as well as to care for the eye locally.

There is a tendency among many people to disregard inflammations of the eye or to dismiss them as "a cold." It would be far safer to reach a correct diagnosis at an early stage and institute proper treatment than to wait, and risk the loss of precious eyesight.

Cataract is a common eye disease

that affects people over the age of forty. It is a term that is applied to any clouding of the crystalline lens of the eye. It is possible to have only a slight clouding of the lens, which may be stationary and never progress to blindness. Most cases do become blind after an unpredictable period, ranging from several months to several years. There is no known form of medical treatment that will cure cataract. Treatment consists in keeping the patient in the best possible state of general health until the vision becomes poor enough to interfere with the daily routine. Then surgical removal of the cataract is advised. More than 95 per cent of cataract operations are successful. Then the patient wears glasses that function in place of the removed lens, and normal eyesight is restored.

Any person who has a cataract at any stage of development should be under the regular care of an eye physician. The disease sometimes becomes complicated by other conditions, which, if untreated, make later cataract operation impossible or unsuccessful.

Glaucoma, or hardening of the eyeballs, is the most serious of eye diseases and the major cause of blindness in persons over forty. If not treated, it destroys the optic nerve. As the side vision of the eye is the first to be lost, the affected person often does not notice any abnormality. In some cases there is no pain. With further progress of the disease, blindness closes in from the sides, and eventually the direct vision is lost.

Eyesight once lost through glaucoma can never be regained. Eye physicians can successfully treat it by "drops" and sometimes by surgical operation, but it is important to emphasize that glaucoma must be recognized and treated in its early stages. The longer it is permitted to develop, the more difficult is control of its progress. Periodic examinations by an eye physician of all persons over forty would materially reduce glaucoma blindness.

The compulsory physical examination of young adults under the Selective Service Act revealed that eyes were a major cause of disqualification, accounting for almost 14 per cent of the rejections, second only to defective teeth. Most young men had paid little or no attention to their eyes. Many con-

LITTLE STROKES

One of the most common diseases of man is "little strokes," which in the course of twenty years gradually pulls him down, according to Dr. Walter C. Alvarez, who made a report on this subject in the *Journal of the American Medical Association.*

The little strokes come from plugging of the small arteries of the brain. The resultant brain damage cuts off the normal function due to lack of circulation.

Patients recover after a little stroke, and some may go for ten to twenty years in good health before having another. Winston Churchill is a living example of this, for he had a stroke several years ago, from which he was partially paralyzed, but he made a remarkable recovery.

The onset of the disease can be delayed somewhat by keeping the weight down and reducing the amount of cholesterol (a fatlike substance) in the diet.

Little strokes are not easy to diagnose, especially since the patient frequently confuses his symptoms with other diseases such as ulcers and gall-stones and neglects to tell his physician about the important symptoms that would reveal the history of little strokes. Among the symptoms to be suspected are:

1. A man or woman past thirty-eight who has a mental or nervous instability that is out of all proportion to the indigestion or abdominal and chest pains he complains of.

2. There may be a nervous breakdown or a queer group of symptoms that appear suddenly on a certain day.

3. The physician may learn from the family that after a dizzy spell, a blackout, or perhaps a fall there were decided changes in character, personality, and ability to work.

The common change from a kind, affectionate, gentle husband to one who begins to explode with anger is also perhaps a sign. The little stroke may go on unnoticed, and it can occur during sleep.

Loss of ability to work may be a sign that puzzles a patient and his employer. Even a brief physical check-up may reveal no apparent cause. Fear of being alone, loss of old interests, visual troubles, pain, arthritis, "acute indigestion," burning and bad taste in the mouth, falling down steps, changes in writing, speaking, and in ability to swallow may be indications of little strokes, Dr. Alvarez says. He believes he can make the diagnosis by simply watching a man get up clumsily and with difficulty from a chair in the waiting room. He says, "I often make the diagnosis when I see how dull a man looks and how much older he is than his chronologic age."

To hold out hope to patients, Dr. Alvarez frequently tells them about Pasteur, who for twenty-seven years after a big stroke did much of his best work. Interestingly, Pasteur's barber told a Parisian friend of Dr. Alvarez that through the years Pasteur must have had some fifty little strokes.

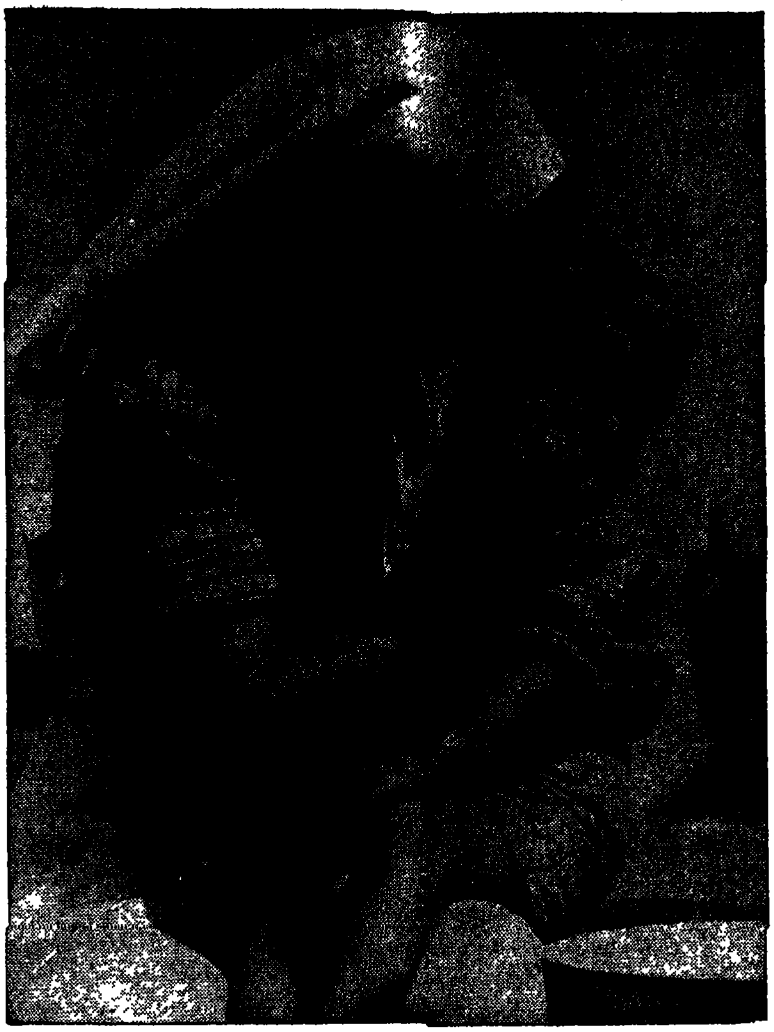
itions could have been corrected had they been attended to early in ife. A medical eye examination hould be required, just as a general physical examination is equired, for every child starting chool. Children who obviously ave poor vision, cross-eyes, or a general disease should have their yes examined much earlier. The ge of two and a half is the time o start treatment of cross-eyes. The ye doctor is concerned not only vith straightening the eye that rosses but, more important, with mproving its vision, which is sually poor, and with making oth eyes work together.

Children often attend school for nany terms without receiving dequate eye care. Many are egarded as backward when in eality they are normal, but handiapped by defective sight. Good ision in itself does not exclude the ossibility that a child is handiapped in his work. A child may ave excellent vision and yet may e seeing at the expense of a great eal of effort—a condition that lasses will relieve. Children whose vision is very defective and cannot be improved, and those who have progressive eye disease, are referred to special sight-saving classes.

Eye physicians have at their command "drops" without which it is impossible for anyone to examine a child's eyes accurately. The drops enlarge the pupil and relax the internal muscle, thus enabling the physician to study the condition of the eye, to uncover latent general disease, and at the same time to measure the optic error. By this method it is possible to determine exactly what strength of glass is required without depending at all on the co-operation of the child.

Medical eye examination ensures a maximum degree of safety for the maintenance of good vision, healthy eyes, and good general health. An eye physician prescribes glasses when they are necessary only after local and general disease have been excluded.

It is best to have the eyes examined at certain periods of life; before a child enters school, at the time of choosing an occupation, at the age of forty, and regularly at two-year intervals in later life.



Children often attend school for many terms without receiving adequate eye care.

HAPPINESS IN A HANDBAG

(Continued from p. 7.)

of an alarm clock would be a soothing novelty for the raw nerves of many a cooped-up denizen of a city apartment. To smell the balsams on the morning breeze mingled with the smoke of a pine-branch campfire would be a better appetizer than all the tonics at the corner drugstore.

Take care in packing a handbag for vacation that you do not carry along too many reminders of the things you left behind. Thousands spoil the pleasure of a journey by taking a hundred gadgets of civilization with them. They profess to be "getting away from it all," but their bulging cars suggest they are taking it all with them.

It is amusing how some people in preparing for a vacation try to think of every possible contingency, *and carry loads of stuff they* never even open on the tour. I know, for I once took an eight-thousand mile journey on which I took some clothes I never wore, at least one suitcase I never unstrapped, and a box I never opened!

(Continued from p. 28.)

MAD DOGS KILL NO MORE

(Second of Two Articles)

WILLIAM KITAY

The new rabies treatment takes away much of the horror from the bite of a mongrel.

THE idea of an anti-rabies serum to provide immunity in human beings against the deadly virus is not entirely new. Some of Pasteur's associates expressed the possibility of providing passive protection through the use of antibodies created by the blood stream in response to a bite from a rabid animal. But with the release of the Pasteur vaccine, scientific thought about a serum was put aside.

The use of vaccine in the treatment of rabies is the most unusual approach in all of medicine. Rabies is the only infectious disease in which an attempt is made to immunize a person after he has been exposed. The only reason this is possible is that the virus has an unusually long incubation period, sometimes as long as forty days. The ideal medical procedure would be to immunize people and animals against rabies before they have the opportunity of being exposed to the disease. This is the principle followed in the inoculation of dogs with vaccine. Although rabies is widespread among human beings, the incidence has never reached sufficient epidemic proportions to warrant routine advance immunization of all persons with a not entirely reliable or not completely safe vaccine.

It is because the Pasteur vaccine is used after a person has been exposed to the virus that the attempted immunization often fails. Most vaccine failures involve a person who has got a large dose of the virus through a severe bite, especially one about the face, neck, or head. In such cases the virus travels quickly along a nerve pattern to the brain before the vaccine has opportunity to produce immunity.

As vaccine failures became widespread, especially in Central Europe, India, and Iran (where attacks by wild animals were not uncommon), medical scientists concerned with this waste of human life dusted off the idea of an anti-rabies serum. Early attempts to perfect such a serum failed. They were far too crude. Scientific knowledge had not advanced enough to enable the production of antibodies sufficiently concentrated to do any good.

The break came thirteen years ago in the form of a tragedy—the death from rabies of a little girl in a small community near Macon, Georgia. Dr. H. N. Johnson of the Rockefeller Foundation, who was studying rabies in the south at the time, took a culture of the virus to his laboratories in Montgomery, Alabama.

Using the brain tissue of day-old chicks, Dr. Johnson used the virus and developed a new fixed strain, whose activity could be measured. Before that time the strength of the rabies virus was unknown. The new virus strain was named the Flury strain, after the family name of the little Georgian girl.

In further experiments Dr. Johnson discovered that the Flury strain of rabies virus has a peculiarity all its own—an inherent safety factor. When injected into the brain of an animal it caused paralysis rabies, yet it could not be recovered from the saliva of the animal.

Dr. Johnson had broken the chain of transmission of rabies. For the first time rabies could be given an animal without risk of turning the animal into a mad dog capable of spreading the disease. The way was clear for the development of an effective immunizing agent, an anti-rabies serum that could be used on human beings.

Dr. Hilary Koprowski, internationally known virus specialist, took on the challenge. In his laboratories at Pearl River, New York, where he is assistant director of the Section of Viral and Rickettsial Research for the Lederle Laboratories, he set to work modifying the virus strain and simplifying its production, using chick embryos.

Dr. Koprowski first tested the anti-rabies serum on laboratory animals. Then nearly 20,000 dogs were vaccinated in trial field tests. After receiving the serum the dogs were injected with the common untempered form of the virus. Not one animal developed rabies.

The next step was to try the anti-rabies serum on human beings.

PASTEURIAN TREATMENT FOR THE PREVENTION OF HYDROPHOBIA

The Pasteur anti-rabic treatment is now available in most centres in India. In every place where there is a first-class civil hospital, in all military hospitals, in many Mission hospitals, in railway hospitals at leading centres, and in district and central jails there are facilities for giving the anti-rabic treatment. The new one-injection vaccine is not yet commercially available in India.

A few years ago the first clinical trials involving human beings got under way quietly in Georgia. The serum was put to a rather severe test when its use was restricted by the State Health department to cases of severe face or hand bites by known animals strongly suspected of being rabid.

The anti-rabies serum has been administered to more than two hundred persons, many of whom had been severely bitten by animals that were later proved to be rabid. The serum caused no serious side effects, and there were no deaths from either the treatment or the disease.

The new anti-rabies serum consists of antibodies produced in the blood stream of a horse highly immunized with the Flury rabies vaccine. Sizable multiple doses of vaccine given the animal over a long period of time produce a serum containing a high level of antibodies against the rabies virus.

Injection of this serum into a person exposed to rabies provides the victim with a ready-made supply of antibodies that can go to work immediately. Because the antibodies were made in the body of a horse and not by the person who receives them, they are eventually destroyed. In the two or three weeks that they are able to exist in full strength, they provide their host with a temporary or a passive immunity against rabies.

It is in the supply of ready-made antibodies that the new serum differs from the long-used conventional rabies vaccine. The vaccine consists of controlled quantities of the living or dead virus; when injected into a person it causes the body to produce its own immunity and its own antibodies. Antibodies so produced will protect human beings against rabies for at least six months, and will protect dogs from one to three years.

The vaccine discovered and perfected by Pasteur consisted of the living virus. Today ninety per cent of the vaccine being used consists of virus that has been killed *by chemicals or by ultra-violet* rays. The virus is contained in brain tissue taken from animals that have developed rabies. It is this contaminated brain tissue that is inoculated into humans. Dr. Habel labels rabies vaccine "the crudest biological product injected into human beings today."

Incidentally, it is the brain material in which the rabies virus is imbeded that causes vaccine deaths. Many individuals develop an allergy to the brain tissue, and come down with allergic encephalitis, and inflammation of the brain and spinal cord. The nervous system becomes involved, and death usually follows.

In a desperate effort to save the lives of severely bitten persons likely to be vaccine failures and of those likely to be allergic to the vaccine, Dr. Koprowski pressed on with the research that eventually led to the development of the new anti-rabies serum.

Dr. Koprowski says that anti-rabies serum should be given in every case of severe exposure. It should be administered within the shortest possible time after exposure, preferably within twenty-four hours and certainly not later than seventy-two hours. It is believed the serum has little or no effect when given ninety-six or more hours after the virus has entered the body through a wound.

For the time being, scientists suggest that the new serum be used in conjunction with vaccine. Although the serum has shown itself to be far superior to the vaccine in preventing rabies, the combination of both treatments not only provides a highly potent guardian against rabies but also permits the shortening of the standard vaccine course from twenty-one to fourteen or fewer days. The shortened time alone decreases much of the risk of dangerous side reactions to the vaccine.

The serum treatment consists of but one injection. It is recommended that the first vaccine be given twenty-four hours later. Because the serum antibodies may last at least ten days, many doctors believe that the vaccine injections may be started at any time during the ten-day period. If a person is bitten again within one year after receiving vaccine treatment, a single injection of the serum alone may provide sufficient protection.

Dr. Sellers, the Georgia health commissioner who first administered the serum to human beings, is so convinced of the value of the new treatment that he predicts: "In due time, the use of serum could well replace the use of the rabies vaccine."

The new anti-rabies serum, now available commercially, is proving highly successful in preventing rabies deaths in severely bitten persons whom vaccine could never have begun to help. For the first time medical history is now able to record: Mad dogs are killers no more!

STORY TIME

PROMISE TO MOTHER

RANI felt proud when mother left her to take care of Baby Mira while she visited Mrs. Bhat who was ill.

"Keep her happy, Rani," mother told her. "I will not be gone very long."

"Bye, mamma," Rani waved as her mother turned into the road that led to the Bhats' home.

She amused the baby by tossing her soft ball into the play pen and trying to teach Mira to pitch it back to her. After a time Mira got tired and curled up on her pillow and shut her blue eyes. Rani watched until she was sure the baby was asleep. Then she got out several books and began to read the stories.

"Hi, Rani," called a voice from behind the old pepper tree. It was Leela Andrews, who lived down the road. Leela was Rani's chum.

"Did you come to play, Leela?"

"Not this time. I want you to come to see the baby rabbits Dad brought for Tommy and me. They are darlings!"

"Oh, I can't," and Rani quickly explained about mother's being away and that the baby was asleep. "I'd love to see them," she added.

"Come on then. The baby will stay asleep and never even know you're gone. Leela pulled Rani's hand, and before she knew it she was following her friend along the dusty road toward the Andrew's home.

The rabbits were darling! They nibbled at everything. They hopped over the grass and played like kittens.

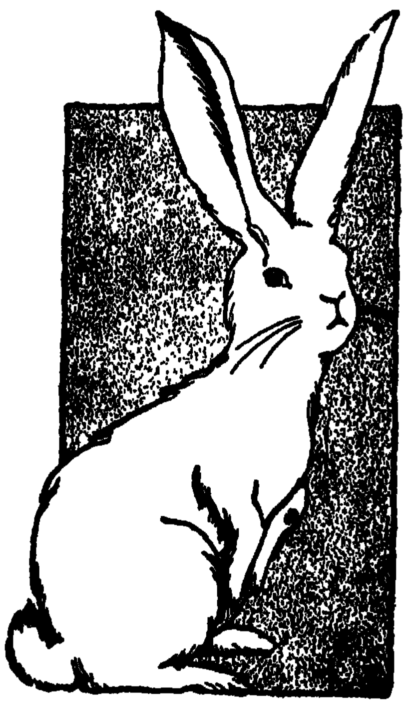
"Let's go into the garden and pull some baby carrots for them," Leela said. Both girls skipped over to the garden and began to search for the tender carrots.

"We're having a garden of our own," Leela explained, "so we can save more money to send to those who will buy food for the hungry boys and girls in other countries. What are you going to do to help them?"

"I'll raise a garden too," Rani promised. "Daddy will spade it up for me."

It was so much fun feeding the rabbits that Rani forgot all about the baby. Suddenly she remembered her. "Oh, I must go! What if Mira has awakened? She'll be crying like everything if she's alone." And Rani ran off quickly.

As she turned into her yard she



[illegible] wondered why the bright blue of Mira's play suit didn't show through the bars of the play pen She raced forward. Mira wasn't there. The pen was empty!

Rani began to cry. "What shall I do? Oh, what shall I do?" She must get to mother immediately; she would know what to do. But mother was at Bhat's and there was Tipu, Bhat's big fierce police dog. Rani was terrified even to look at him. He barked and the earth seemed to tremble.

But now she turned and raced along the back trail that led over the hill to the Bhat home. Up she scrambled, tearing her dress and scratching her knees on brambles. She must get to mother and tell her.

When she reached the hill that led to the road into Bhat's compound, Rani stopped short. A thunderous yelp shook the earth. Tipu! What if he had jumped over the fence and was coming after her? Her heart seemed to leap and stick in her throat. She swallowed hard, but there he was!

A number of fierce yelps followed. Rani's knees shook and her heart bounded at each one. What could she do? She must go on and find mother, and yet how could she face Tipu?

Then Rani remembered the story she had been reading when Leela interrupted her. It was about a man, a good man named Daniel. Daniel was never afraid because he trusted God and knew God would take care of him. God would take care of her, too, Rani knew. But she was not good like Daniel; she had left little Mira when mothe depended upon her to watch her Now the baby was gone. Mayb God would not hear her prayer But the memory of the many, many times she had heard of His good ness, of His willingness to forgive made Rani feel brave. As sh murmured a fervent prayer sh seemed to be less afraid of meetin Tipu, so much less afraid that sh ran forward and never paused un

il she reached the kitchen door of Bhat's house.

"Why, your mother has been gone a long time, Rani," Mr. Bhat told her, "She ought to be at home now."

"Oh, thank you, Mr. Bhat," Rani stammered, and started away. When she reached her own gate, her heart gave a tremendous jump. There, bending over the play pen, with Mira gurgling happily inside, was mother. Rani flung herself into mother's arms and sobbed out her story. Mother listened patiently.

"I'm sure this lesson is all you'll need, Rani. I think now you understand that no matter what you want to do, you must think first of what you should do."—*Anon.*

HOMEMAKERS' HELPS

THAT PALE, TIRED LOOK

M. Ninaj Larson

"I CAN'T understand why Kumar is so pale and thin, and why he is always tired." Have you heard an anxious mother express her concern in words like these? The answer may not be difficult to find.

Many children (and adults) are pale, thin, and weak because of anæmia, a disease due to nutritional deficiency—lack of sufficient iron in the body. It is not confined to the poor, but is often found among the well-to-do.

The red colour of the blood is due to the presence of hæmoglobin, the iron-bearing protein. Scientists have discovered that there are in the body about 25 million times a million red blood corpuscles. It is the hæmoglobin that carries the life- and strength-giving oxygen through all the arteries and capillaries from the lungs to the innermost cells of every organ and every tissue in the body. It is also the hæmoglobin that carries the waste carbon dioxide from the innermost cells to the lungs and thence out of the body

Without a sufficient amount of oxygen the cells cannot function properly, for oxygen is the life of the body. When the cells do not get enough oxygen, they cannot do their work properly, and the body becomes fatigued and weak. It is the presence of a sufficient amount of iron in the body that enables the body to receive all the oxygen it needs. An anæmic person is langourous. He gets out of breath easily. He feels constantly tired. He cannot do much work. If one would feel well and strong and full of life, he needs to keep his hæmoglobin built up to a high percentage.

Iron is necessary for blood formation. It is also an essential part of the cell structure. The vital processes of the cell depend upon the presence of iron.

Iron is essential for blood formation, for it is an essential constituent of the hæmoglobin molecule. Infection, chronic malaria, and hookworm infection are common causes of the destruction and loss *of blood corpuscles. But lack iron-containing foods is anoth common cause for a low hæm globin percentage.*

If any member of your famil seems perpetually weak and pale it is well to have a good physical check-up by your doctor. He will examine the blood and stool for the presence of malaria or worm infections. He will also examine the blood for its hæmoglobin content.

When all infection is cleared away, it is relatively easy to build up the hæmoglobin content of the blood by eating daily of iron-bearing foods.

Many years ago one of our neighbours tried to build up her low hæmoglobin by drinking the water in which nails had been soaked. Nature has an easier way.

Iron is found in green leaves, in

RECIPES

Scalloped Raw Cabbage

One pint shredded cabbage; 1½ cups milk; 1½ tablespoonfuls flour; 2 tablespoonfuls margarine or butter; ¾ teaspoonful salt; ½ cup grated cheese; ¾ cup buttered crumbs.

Make a white sauce by cooking the milk, flour, salt, and butter which have been stirred into a smooth paste. Stir in the cheese. Place thin layer of cabbage in baking pan, then a layer of the hot milk sauce, alternating until all is used. Spread buttered crumbs on top. Bake uncovered in moderate oven for about 40 minutes or until much of the milk has been absorbed, and top is brown. Serve promptly.

Three-In-One

Six carrots; 6 onions; 10 potatoes; salt to taste; 2 tablespoonfuls butter or margarine; ½ cup rich milk.

Boil carrots and onions together and potatoes separately. When thoroughly cooked, put together and mash after they have drained well. Add salt, butter, and milk. Serve hot. A gravy may be made from the broth.

Lemon Spinach

Carefully wash spinach or other green leaves. Add chopped garlic to taste, salt, and little or no water. Boil until just done. Chop if desired. Sprinkle with lime or lemon juice just before serving. If desired, sprinkle with chopped egg, chopped cashew nuts, or thinly sliced almonds.

Cole Slaw

Two cups chopped cabbage; tablespoonfuls chopped bell pepper 2 desertspoonfuls chopped onion ¼ cup raisins; salt to taste; dressing made of 2 tablespoonfuls milk 1 tablespoonful lime juice, ½ teaspoonful sugar.

Mix lightly together and serv cold. Decorate with slices of tomat or bell pepper.

cereal grains, in grams, in s, in tomatoes, in leeks, in dates, gg yolk, in cauliflower, in other ds. But if we remember the green res, of which there is a great ndance in our country, and ke sure they are a part of our ly diet, we need have little fear t our hæmoglobin will drop very w.

The whole grains, the grams, the ahls, are a part of the daily diet of the Indian people. But there is not enough iron in the diet if green eaves and other iron-containing foods are not added each day. Green leaves are easily grown in all ections of our country. They hould be cooked until just done and served as simply as possible. Sometimes we kill the value of ome of our foods by frying in too much oil, or in some other way. Simple foods prepared in a simple, tasty way do the most good to the body, for then the elements which keep the body in health and repair are in a condition to be more easily assimilated.

It is especially important that pregnant women provide for themselves a liberal amount of these iron-containing foods since they not only need to keep their own bodies in the best possible condition, but they need to provide enough of the needed dietary elements for the unborn child so that it may develop normally and accumulate a reserve of iron for use during the first few months of its life. Vitamin A can be, and is, stored in the body. But iron is not stored in the same way and needs to be constantly replenished.

Start today. Check your daily menus for iron-containing foods, and help the family to eat its way o health.

ERRATUM

On page 27 of the December issue of the "Herald of Health" the ingredients for the *Creamed Cheese on Toast* should have read as follows:

A quarter cup flour; ½ cup grated cheddar cheese; 2 cups milk; salt to taste.

TOBACCO TOPICS

According to Dr. Ernest L. Wynder, longtime researcher of the Sloan Kettering Institute for Cancer Research, a smoker who drinks six or more ounces of liquor a day is seven times as liable to get larynx cancer as a teetotaler who smokes the same amount. If American men would only stop their smoking, he points out, they could probably reduce larynx and lung cancer by eighty per cent.

As far back as 1942 the Federal Trade Commission tested one brand of cigarettes widely advertised as containing less nicotine than others, and found that the claim was based on a fantastically small fraction, adding up to only 1/24th of an ounce in 365 packs. All cigarettes, it found, contain throat irritants "in essentially the same quantities and degrees."—*Christian Science Monitor,* March 12, 1955.

Says Sylvia Porter, well-known business columnist and reporter: "There'll be increasing emphasis on the virtues of non-smoking, no let-up in the books, articles, etc., telling us how to stop smoking or cut down or neutralize the harmful effects. . . . We will continue smoking until we no longer enjoy the habit. And that is a development I doubt we'll ever see." What will it take to remove this so-called pleasure?

Estimates by the United States Government indicate that during the eighteen months ending in June, 1955, more than 1,500,000 American cigarette smokers had quit smoking entirely. The figure was based on a sample 40,000 persons surveyed by the Census Bureau for the Public Health Service. This compares with an estimated 600,000 who quit during the previous year.

"There is something about the cigarette habit that weakens and unnerves the youth. It destroys the victim's memory, impairs his reasoning facilities, robs him of his power of attention, saps his will power, and deprives him of his initiative."—Judge de Lacy, Juvenile Court, Washington, D.C.

"The Public Health Service should warn smokers against the hazards of excessive smoking. All cigarette advertising should contain the warning, and it should appear on each pack and carton." Joseph J. Seldin, writing in the *Nation,* Feb. 12, 1955.

"Smoking is a habit to which I am addicted. Since I've been in this business I have smoked sixty to seventy cigarettes a day. I doubt very much that I could spend a half hour without a cigarette with any comfort or ease."—Ed. Murrow, television star of "See it now," after devoting two of his programmes to an inquiry into cigarettes and lung cancer.

At a press conference following the presentation of the Hammond-Horn report on lung cancer to the National AMA convention in Atlantic City, it was made clear by Dr. Charles S. Cameron, medical and scientific director of the American Cancer Society, that the Society now is convinced of "cause against the cigarette."

HAPPINESS IN A HANDBAG

(Continued from p. 21.)

Contrast that to a 150-mile bicycle vacation I took thirty years ago, when all I carried was what would fill a small wire bicycle carrier. Talk about exciting recreation and adventure! The fun came through the challenge of unknown and unpaved roads, sleeping in farmers' haymows, and meeting emergencies with meagre resources. I shall never forget the thrill of the wild in the coyotes' serenade under the stars in the mountains of western Montana.

There are those who prefer to live less dangerously. But they too can find pleasure in a vacation handbag. The point is to get away from the smell of hot macadam streets for a while and breathe a different air. A lake or a beach cottage would be ideal. Boating, sailing, or surf-board riding afford one a thrilling change from the artificial atmosphere of an air-conditioned office. Twenty-minute sun baths liven up a discouraged skin, and gathering sea-shells gives a start in conchology as a hobby.

Speaking of hobbies, many an interesting hobby has been launched on a vacation. Collecting flowers for pressing, identifying birds, hunting by camera, gathering driftwood in odd shapes, can afford entertainment and recreation for many a happy hour.

Perhaps quietude is not what you want. Your sedentary job has been too confining. You want a vacation with motion and a bit of excitement. But because you drive your car every day in the year, a long auto journey is not inviting. Well, there are wonderful tours available by bus, by train, and by plane. Representatives of transportation agencies will help you plan them. The buses drop you off for refreshments at air-cooled restaurants. Trains afford wonderful three-course dinners in their palatial dining cars. Planes offer delicious meals literally "out of this world," several thousand feet aloft as you skim between the clouds.

Rushing is not recreation. Stopping here and there affords one of the most interesting challenges to the jaded mind. Nearly every locality has its point of historical or phenomenal significance. Pottery shops and roadside stands afford unscheduled stops that yield moments of pleasure. Ice-cold watermelon eaten in the shade of a tree a thousand miles from home on a hot day is a happy item of the diary. Then there is the fun of choosing souvenirs of the journey as gifts for treasured friends.

America is on wheels, and walking anywhere more than a block unfortunately is becoming outmoded. A good hike over hill and down dale, across swollen streams on a log, is still part of a wonderful vacation. Don't try it on a reducing diet; the fresh air and exercise will make you eat like a wolf and sleep like a log. A stick across the shoulder, a meagre assortment of necessities tied in a bandanna handkerchief at the end—that insigne of the old knight of the road—may be too primitive for you. But seriously hiking isn't much fun if you go loaded down like Bunyan's hero.

Travelling with a light handbag reduces fretfulness to a minimum. There isn't much to worry about, not even if you lose the bag. Lacking some of the things you have been accustomed to at home will sharpen your wits. Besides you will be surprised at the delightful courtesies many people will extend to you. They leave newspapers at your motel door, give you free post-cards descriptive of their locale, and identify the best places to eat. Often if you ask for a drink, they will give you lemonade or something else out of the icebox. Occasionally a garageman will make a minor adjustment on your car without charge. Farmers will tow you out of mudholes free. Other vacationers will invite you to cook your supper on their campfire and regale you with stories of their tour. Such experiences afford a refresher course in the knowledge of the essential kindness that motivates most people, and you come back to your routine duties singing with Browning:

> *"God's in His Heaven,*
> *All's right with the world."*

If you are still unconvinced that there is no particular happiness to be found in a vacation handbag, go out to your memorial park and read the tombstone dates of some local Wentworth Goodman. They may persuade you that if you are too busy to pack a vacation handbag, *you are too busy.*

WHAT DO YOU RESENT?

(Continued from p. 17.)

is confirmed. We hate ourselves and become despondent.

How can you become less touchy and reduce the amount of resentment you feel? One thing you may need to do is to reduce the rush and push of your living. Another need is to evaluate yourself in an unprejudiced, unself-conscious way.

You can fill both of these need by taking time to meditate on th works and words of God. Observa tion and contemplation of th things of nature will show you tha God works efficiently and patientl He does not rush or fret or fum He invites us to "come ye you selves apart into a desert place, an rest a while." In communion wit nature you will not only reduc your nervous tension but you wi be both humbled and reassure that, as Robert Browning wrot "God's in His heaven—all's rig with the world."

Prayerful reading of and medi tion on the words of the Go

[illegible] will do more than anything [illegible] to change your attitudes, so [illegible] you will become deaf to scorn and insults and blind to neglect and slights. You will read that 'God so loved the world, that He gave His only begotten Son, that whosoever believeth in Him should not perish, but have everlasting life.' That statement shows you how much God thinks of you and how little reason you have to be resentful.

You will find much good advice that will help you eliminate unhappiness. One example is the counsel to "be clothed with compassion, kindliness, humility, gentleness, and good temper—forbear and forgive each other in any case of complaint; as Christ forgave you, so must you forgive. And above all you must be loving, for love is the link of the perfect life." You will also be admonished to "fret not thyself because of evildoers," and He promised that "great peace have they which love Thy law: and nothing shall offend them."

If your fuming resumes or your feelings are hurt occasionally, don't be discouraged.

Persistent application of these principles will free you from your unhealthy resentment and uncover energy and joy of living that you may have all but forgotten—or never known.

STIMULANTS AND NARCOTICS

Part II

(Continued from page 15.)

In the light of what the Scriptures, nature, and reason teach concerning the use of intoxicants, how can Christians engage in the raising of hops for beer-making, or in the manufacture of wine or cider for the market? If they love their neighbour as themselves, how can they help to place in his way that which will be a snare to him?

Often intemperance begins in the home. By the use of rich unhealthful food the digestive organs are weakened, and a desire is created for food that is still more stimulating. Thus the appetite is educated to crave continually something stronger. The demand for stimulants becomes more frequent and more difficult to resist. The system becomes more or less filled with poison, and the more debilitated it becomes, the greater is the desire for these things. One step in the wrong direction prepares the way for another. Many who would not be guilty of placing on their table wine or liquor of any kind will load their table with food which creates such a thirst for strong drink that to resist the temptation is almost impossible. Wrong habits of eating and drinking destroy the health and prepare the way for drunkenness.

There would soon be little necessity for temperance crusades, if in the youth who form and fashion society, right principles in regard to temperance could be implanted. Let parents begin a crusade against intemperance at their own firesides, in the principles they teach their children to follow from infancy, and they may hope for success.

There is work for mothers in helping their children to form correct habits and pure tastes. Educate the appetite; teach the children to abhor stimulants. Bring your children up to have moral stamina to resist the evil that surrounds them. Teach them that they are not always to be swayed by others, that they are not to yield to strong influences, but to influence others for good.

Great efforts are made to put down intemperance; but there is much effort that is not directed to the right point. The advocates of temperance reform should be awakened to the evils resulting from the use of unwholesome food, condiments, tea, and coffee. We bid all temperance workers Godspeed; but we invite them to look more deeply into the cause of the evil they war against, and to be sure that they are consistent in reform.

It must be kept before the people that the right balance of the mental and moral powers depends in a great degree on the right condition of the physical system. All narcotics and unnatural stimulants that enfeeble and degrade the physical nature tend to lower the tone of the intellect and morals. Intemperance lies at the foundation of the moral depravity of the world. By the indulgence of perverted appetite, man loses his power to resist temptation.

Temperance reformers have a work to do in educating the people in these lines. Teach them that health, character, and even life, are

endangered by the use of stimulants, which excite the exhausted energies to unnatural, spasmodic action.

In relation to tea, coffee, tobacco, and alcohol drinks, the only safe course is to touch not, taste not, handle not. The tendency of tea, coffee, and similar drinks is in the same direction as that of alcoholic liquor and tobacco, and in some cases the habit is as difficult to break as it is for the drunkard to give up intoxicants. Those who attempt to leave off these stimulants will for a time feel a loss, and will suffer without them. But b persistence they will overcome th craving, and cease to feel the lac Nature may require a little time recover from the abuse she h suffered; but give her a chanc and she will again rally, and pe form her work nobly and well.

GARDENING FOR HEALTH

IN YOUR GARDEN

D. G. Cooper

THERE are at least half a dozen good reasons, why one should have a vegetable garden. The vegetables obtained from our local markets can hardly be called fresh, owing to improper storing facilities. Coupled with this is the fact that variations in weather conditions cause a speedy deterioration of green vegetables. One is therefore compelled to buy and consume vegetables of an inferior quality. Anyone who has tasted freshly picked peas, can hardly fail to notice the difference in flavour and sweetness from those that are purchased from the *markets.*

There are about three or four different varieties in each species of vegetable. For example, there are small red and white round radishes for the table; the black radishes for pickling; the white and red long varieties for cooking, and also a few other varieties differing in shape, size, colour, and taste. One seldom gets an opportunity to purchase even one or two of these varieties, as the farmers grow only such vegetables, as meet with an everyday demand.

Not only is it possible to save money through possession of a good garden, but also to get the benefit of fresh air and mild exercise.

It is not necessary to have acres of land to start a vegetable garden. On the contrary, a small plot, well cultivated, can yield enough vegetables to feed a whole family. However, it is essential that the plot chosen for the vegetable garden be free of shade from overhanging branches and also from strong winds, which may injure the crops.

Success in gardening, largely depends upon the soil and manures that are used. Sandy loam is the best, as it provides good drainage and at the same time does not dry out too quickly. Clayey soil may be improved by incorporating with it lime, sand, ashes, and decayed vegetation.

Good manure, which is well decomposed, is somewhat difficult to obtain. The only remedy is to prepare pits, in which dried leaves, kitchen refuse, and lawn clippings may be added. After a period of about one year, an excellent organic manure will result from the decomposed matter which has accumulated in the pits. Where space is restricted, it will not be possible to prepare organic manure, and in such cases commercial organic fertilizers will have to be used, at a little extra cost.

Seedlings of vegetables are usually available from the local nurserymen. However, there is more satisfaction in raising one's own seedlings, as it does not entail much labour or extra expense. Flat shallow boxes or pots will serve the purpose for raising seedlings. The boxes should be filled with a mixture of good garden soil and a small quantity of leaf-mould or well-rotted stable manure. Place the boxes in semi-shade. Seeds should not be sown too thick, as over-crowded boxes will produce spindly and weak plants. Daily

GARDEN CALENDAR FOR JANUARY

Plains

Vegetables:	Sow cress, lettuce, mustard, radish, spinach and beet. Water cabbage, cauliflower and other vegetables copiously. Liquid manure may be applied weekly with advantage.
Flowers:	Apply liquid manure to roses once a week. Chrysanthemums may be removed from pots, and suckers to be planted out into nursery beds. Cannas should be forked, and stable manure applied every fortnight.
	Prune allamanda, begonias, hibiscus, lantana, etc.
Fruits:	Prune grapes, peaches, and plums.

Hills

Vegetables:	Sow cabbage, cauliflower, broccoli, and celery.
Flowers:	Sow petunias, cinerarias and primulas.

watering is necessary. Care should be exercised to prevent over-watering, otherwise plants will dampen off owing to excess moisture. Always keep the soil fairly moist but not soggy. Young plants should be carefully lifted from the boxes and transplanted after a period of about three to four weeks. With proper after-care, the plants will thrive readily, producing an abundance of fresh and health-giving vegetables.

PAINS AND GRAINS

(Continued from p. 9.)

"organ recital" by patients. So simple a thing as eating only foods that contain all the original vitamins and minerals would cut our sickness rate to a new low in a short time.

I have on my desk a little bottle full of grains of corn partly eaten by some fur-bearing animals my nurse is raising at home. The little animals are called nutria. I look at the small grains of corn, and what do I see? Half of the grains have the germ end eaten out and the rest have both ends bitten off. If the little animals pick up a grain of corn and bite off the top end, they immediately turn it and bite off the germ. If they pick it up turned so they bite out the germ, they throw it to the ground and pick up another grain.

We reverse the process, taking out the germ, grinding off most of the outer layer with its high mineral content, and, having the starchy centre left, we press out ninety per cent of the oil, as if determined to remove every good thing contained in the grain. This dry centre we sack and sell for corn meal. That is what you get from the stores all over the land. Americans live on this devitalized grain, robbed of its precious B, E, and other vitamins. Then we wonder why the old "car" rattles and squeaks when it should still be running well.

The first step in making corn flakes is to remove the germ, with its oily content. If it were left in, it would soon become rancid, and spoil the sale of the corn flakes. So anything that lowers the commercial value is carefully removed, regardless of how much it may lower the food value.

You cannot eat in an average restaurant or on a train and get foods that will keep you in top health. But if you do a little plai ning, you can supply your ow table with wonderful food that the natural appetite tastes bett than all the prepared products our civilization. These things a of major importance if we expe to run the human machine smoot ly, and beyond the three-score-an ten mark allotted to man. Try now.

LEUCODERMA: Ques.—"I shall obliged if you will please let me ow whether you could recommend y treatment for leucoderma (white tches on the skin).

The white patches started appear- about a year ago. The patient is out forty-two years old. He has en suffering from bleeding piles for last seventeen years or more. Other- se his general health is quite good, hough there is a tendency to put fat."

Ans.—Leucoderma can sometimes controlled by injecting Ludermol o the de-pigmented areas, and by bing it on the areas. Special pre- ations are used for each purpose. is product is prepared by Smith nistreet and Company, 18 Convent ad, Calcutta 14, and can be ained from most well-stocked armacies.

?

RHEUMATISM: Ques.—"I have n suffering from rheumatism for last four years. I have taken thermy treatment and riboflavine ctions with no success. Kindly gest suitable treatment.

ns.—You might find worth-while f from the use of Cortisone in servative dosage. In addition, e certain your diet has sufficient fruits and vegetables in addition good protein, and whole wheat d or cereal. Brewer's yeast tablets good source of natural vitamin omplex.

?

VER-WEIGHT: Ques.—"I am teen years old and my height is 5½ inches. My weight is about lb. I am quite broadly built but ink I am over-weight. Can you se suggest some diet or exercise reduce? Moreover, I feel very l sometimes and my complexion ale. I have been using Lilly's ticebrin vitamins for the last four ths, but it is of no use. My diet ists of milk, fruit, etc. Please se me what to do to improve my th?"

ns.—You are over-weight. I eve that if you would observe the wing programme, you could lose e weight, which will make you much better.

xcess weight is due almost entirely ver-eating. You may think you not eating too much, but if you should carefully make a record and figure out the caloric value, you would find this to be true. There is only one sure and healthful way of reducing, and this is, to cut down the amount of food you eat each day. You should go on a 1,000 caloric diet. Make the early morning meal the largest meal of the day, eating a light supper only, and before six o'clock in the evening. Eat nothing between meals. You may find this a battle for a few days, but your system will soon accommodate itself to the meals and to smaller quantities. Avoid the use of rich foods, foods containing sugar, and fats especially. Eat an abundance of fruits and vegetables. Be sure you get an adequate amount of vitamins and minerals. Some folk ruin their health reducing, by not getting the essentials of nutrition. Instead of using whole milk, use skim milk. Get some skim milk powder to use.

You should have regular exercise each day in the open air and sunlight, but you will have to walk many miles to get rid of a pound of fat. Reducing exercises are not effective in themselves.

There is a drug named Benzedrene or Amphetamine, which when taken half an hour before meals, decreases the appetite. These drugs are, however, potentially dangerous, and should be used under the supervision of a well-qualified physician.

THE DOCTOR SAYS

1. This question and answer service is free *only to regular subscribers.*

2. No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases.

3. All questions must be addressed to The Doctor Says. Correspondence personally with the doctor is not available through this service

4. Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES. Answers cannot be expected under ONE MONTH

5. Questions sent in on Post Cards will not receive attention.

6. Make questions short and to the point. Type them or write them very clearly.

7. Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published Address "The Doctor Says," Oriental Watchman and Herald of Health, P O. Box 35, Poona 1.

It is very difficult to reduce one's weight alone. You should be under the care of a physician, who can check your weight and give you advice and encouragement at least once a week.

?

SWOLLEN HAND: Ques.—"My mother who is about fifty years of age, fell down on the dorsal surface of her left hand some two years back. After this time her hand got swollen and painful, especially at the joints. She has shown it to many doctors. At present it is much less swollen, there is no pain at all but she cannot close her fist properly. The metacarpo-phalangeal joints of the four fingers seem to be quite stiffened and she cannot flex them at all. Can you give us some advice?"

Ans.—Alternate hot and cold treatments to the hand should build up circulation of the blood, stimulate the nerve supply and tone up the muscles of your mother's hand. This treatment can be given as follows:

Choose two metal buckets or some other form of container large enough so that the hand and wrist can be immersed. Fill one with water as hot as can be borne without burning. Fill the other with ice water containing chunks of ice. Place the hand in the hot water for three minutes and in cold for one minute. Repeat this five times in succession, while adding more hot water and being sure that ice is in the cold water. This treatment administered once or twice a day should be of considerable benefit.

?

PYORRHŒA: Ques.—"I am suffering from pyorrhœa. The dentist asked me to use tooth paste for cleaning my teeth. I did so, but there is no improvement. Please let me know the remedy for it."

Ans.—Pyorrhœa may sometimes be cleared by carefully massaging the gums and by brushing the teeth, using a good dentifrice. However, if this is not successful, it may be necessary to go to a well-qualified dentist, who can clean the teeth by scraping off the tartar deposit and also correct other abnormalities. At times, if the condition has progressed too far, it becomes necessary to remove some, or all the teeth and use artificial ones.

?

THE LAST WORD

Pills by the Billions

IT IS no secret that Americans are the world's greatest pill gulpers. For example, they pay nearly $50,000,000 to swallow about 53,000,000 aspirins every day, which fact means that one out of every three persons in the U. S. today has a headache or is feeling anything but tiptop.

To buoy up their spirits and take care of vitamin deficiencies, they spend another $230,000,000 on vitamin capsules annually.

Add to this $1,000,000,000 spent on 400,000,000 prescriptions a year, and you have a big drug bill.

However, according to Theodore C. Lumpp, president of the National Pharmaceutical Council, the average per capita cost of drugs is only $10 a year. Compare this with more than $55 for alcoholic beverages, $32 for tobacco, and $11 for automobile repairs, and it is not so bad.—*Life and Health.*

Ultrasound Treatment

DOCTORS at the University of Illinois in the U. S. are testing the use of ultrasound—sound waves of such high frequencies that the human ear cannot hear them—to treat diseases of the brain. They have used ultrasound waves to destroy diseased brain tissue in an area as small as one-twentieth of an inch without affecting surrounding tissue.

This precision seems to offer possibilities beyond those of the surgeon's knife for destroying tumours or diseased brain tissue. The ultrasound used has a wave frequency of 1,000,000 cycles a second, fifty times higher than the highest audible pitch.

Alcoholism *vs.* Tuberculosis

For the first time, alcohol, in 1955, killed more Frenchmen than tuberculosis: 17,400 deaths from alcoholism and cirrhosis of the liver, with the rate still going up; 13,300 from TB, with the rate still going down.

Anti-Polio Vaccine in Britain

Tests with the new anti-poliomyelitis vaccine being administered in Britain show that the risk of paralytic infection from it is now negligible. This is made known in the Medical Research Council's annual report for 1954-55, published in London on July 10.

The tests in Britain, the report points out, have been slightly modified from the new American tests to make the test subjects still more sensitive. If any active virus can escape the new tests—which is unlikely—the amount is so minute that the risk of paralytic infection is negligible if strains of low virulence are used, as is now the case.

More than ten laboratories in Britain are taking part in a plan to evaluate the British vaccine, especially with reference to age groups below six and between six and nine, because it has still to be shown that in children less virulent strains in the vaccine are as potent as those used in the Salk vaccine.

Blood Pressure Data

A new electronic apparatus which provides continuous blood pressure readings—without risk or discomfort to the patient or trouble to the physician—has been developed in London by Dr. John H. Green, physiologist at the Middlesex Hospital.

The device will enable the clinician to assess the 24-hour effect of new pressure-controlling drugs or of emotional situations and to ascertain systolic pressure levels during sleep, without recourse to arterial puncture. —*Medical News.*

Coffee's Role in Sobering up Alcoholics

Neither coffee nor amphetamine will sober any one up if one is suffering from the depressant effect of alcohol on the nervous system.

These are the essential findings—though they were couched in somewhat more scientific terms—of two Stanford University School of Medicine researchers, Dr. Henry W. Newman and Edith J. Newman.—*Medical News.*

Arthritics with Ulcers

Arthritics with active peptic ulcer can be treated safely with prednisone a University of Pittsburgh rheumatologist reported here.

Dr. H. M. Margolis told the Fourt Midwest Conference on Rheumati Diseases that this can be done if " strict ulcer regimen" is followed an "antacids and antispasmodics ar administered concomitantly. —*Medical News.*

Developing Mass Cancer Screenin

The National Cancer Institute getting set to launch a series tightly controlled clinical trials develop massing screening metho for detecting cancer of the lun stomach, intestines and genit urinary tract.

The hope is to simplify the prese complicated techniques so th cytologic examinations can be giv routinely in physicians' offices even in large-scale screening pr grammes.—*Medical News.*

"Trained" Viruses at Work!

Scientists at the National Institu of Health, Bethesda, Maryla report that they have succeeded "training" viruses to attack quickly destroy human cancers gro in rats. They said at least th Coxsackie B viruses produced "p found oncolytic effects" after be adapted for the task by a series passages through such tumours.

There is no evidence yet that technique will work in humans. the researchers said the success virus adaptation in destroying s tumour transplants of human or "suggests its possible application future clinical studies."—*Me News.*

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A model sewage system

OF THIS WE APPROVE

(Continued from p. 5)

tions of the municipality and in that locality wherever his assistance is needed along lines of health education. Classes are held in the museum for groups of students at their convenience. Also a feature of the museum which is of great value, educationally, is the service it offers to the various organizations within the city limits of Baroda. Posters and models from the museum are lent for exhibitions organized free within the city limits. Film strips and talkies on health subjects are also shown throughout the city almost daily, and regularly on Sundays near the health museum where hundreds of people attend every showing.

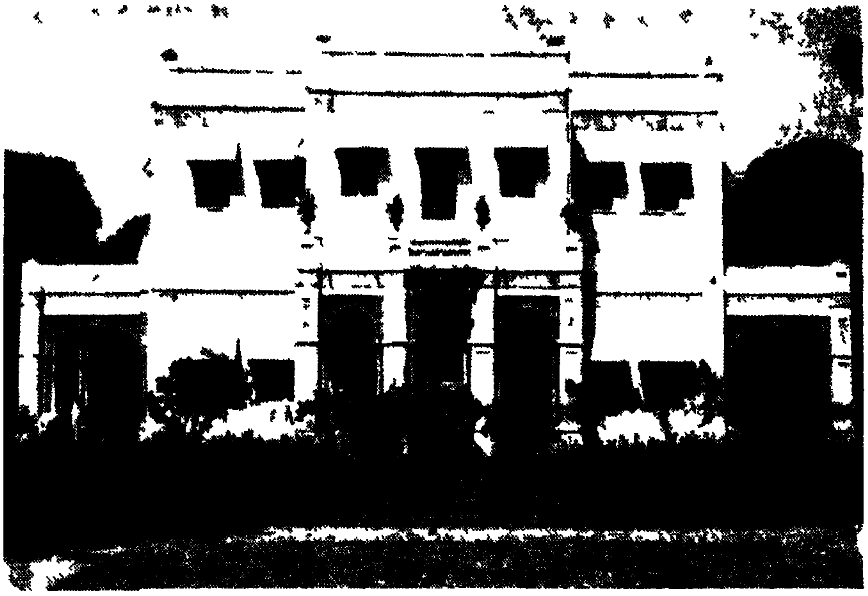
Modern trends in health education emphasize the importance of establishing such health museums, the holding of health exhibitions in all possible centres, the giving of lectures, presentation of articles, essays, dramas, film shows, etc., to stimulate the people in taking an active part in a positive health programme. This is all in harmony with the modern trend toward preventative medicines or prevention in medicine, as contrasted with cure. Such health education can do much to help the medical men and the departments of sanitation and public health to control contagion, to remove filth and disease and thereby improve health and longevity within the community.

Inasmuch as the Baroda Health Musuem has started its work very seriously, it is doing more than that. It is actually contributing articles to the daily local press concerning health topics, and by questionnaires it is arousing the public health interest, removing false notions on health and doing research by finding out what people know and then guiding them scientifically into an understanding of that which they do not know.

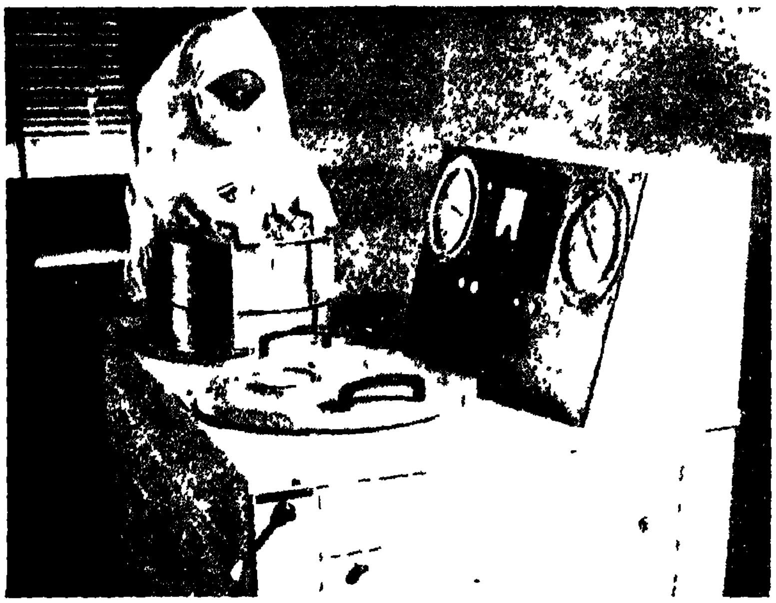
The museum has some very fine charts dealing with various matters of health and the charts are simple enough that even those of very little education and even, in some cases illiterate, are still able to obtain value from them. One exhibit that is of great interest is the experiment on mice or rats to find the energy given off or obtainable from different diets. Another exhibit has to do with the effect of alcohol on the memory, activity and nutrition of such animals.

It is the aim of the Baroda Health Museum to evolve itself into an educational institution where not only the masses learn but even the school and college students, teachers and professors may find it a centre for promoting individual, community, and industrial health.

(Next month we plan to report on an interesting institution in the Andhra State. ED.)



The Baroda Municipality Health Museum



★ ★ ★

Top Left. The picture, taken at Glaxo Laboratories' BCG Unit, Greenford, Middlesex shows the loading of a primary freeze-drying apparatus with carrier containing ampoules of the vaccine

Photo B I S

★ ★ ★

Bottom Left A picture taken at Glaxo Laboratories' BCG Production Unit, Greenford, Middlesex, shows a laboratory worker cutting off the ampoules of BCG vaccine from *the secondary freeze-drier* during the *last* stage of production

Photo B I S



★ ★ ★

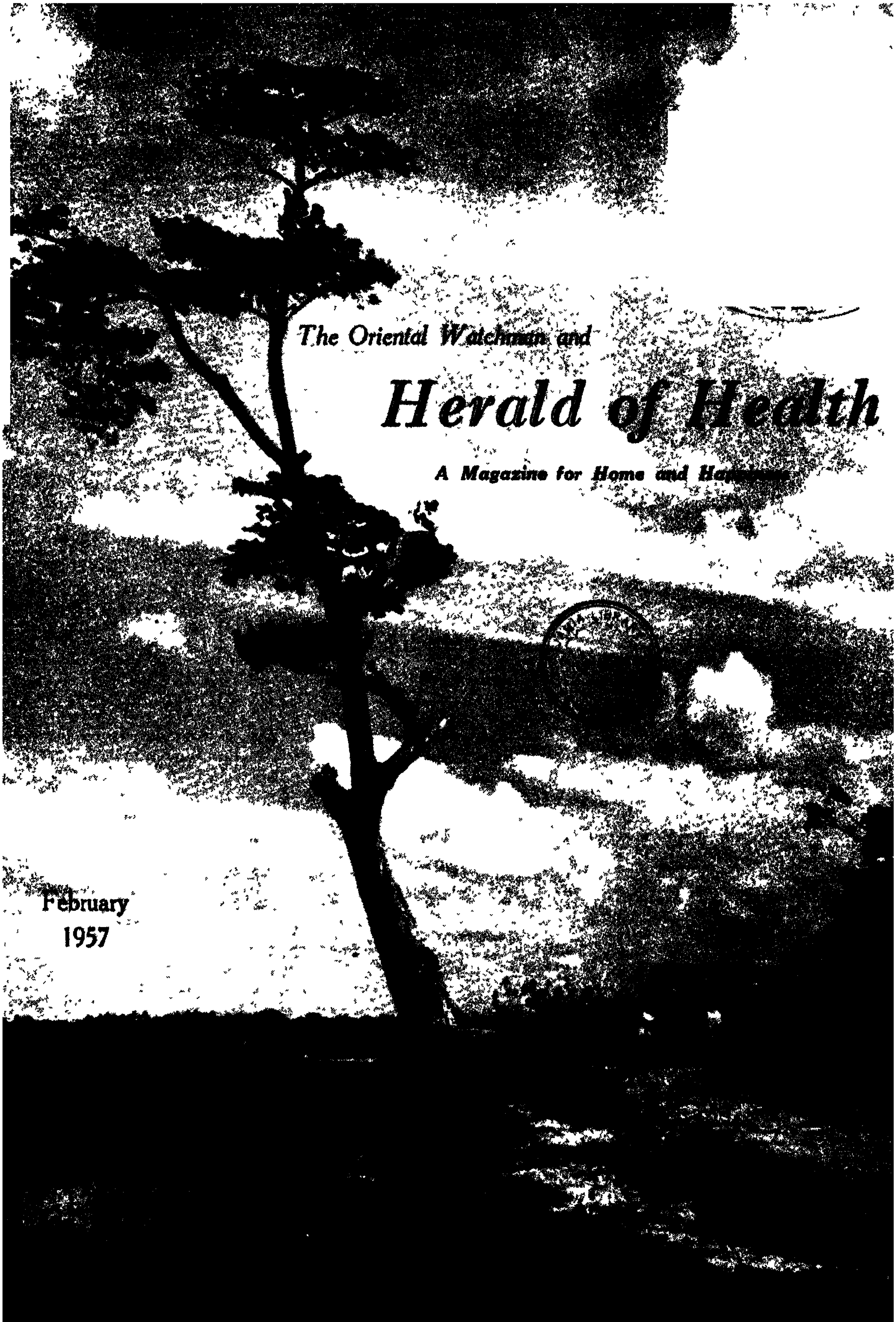
Bottom Right Under the supervision of Mrs David Mosso, director of the Northern Virginia Pre school for Blind Children, five year old June learns to operate a Braille type writer The school was established in 1954 by local chapters of the International Order of Lions Clubs Its aim is to prepare blind children to enter regular schools with sighted boys and girls

Photo U S I S

★ ★ ★

A sound mind in a sound body, is a short but full description of a happy state in this world He that has these two, has little more to wish for, and he that wants either of them, will be little the better for anything else.—John Locke




The Oriental Watchman and
Herald of Health
A Magazine for Home and Ha
February
1957

Disability Does Not Mean Unemployment

A. K. ASTBURY

A British expert, Mr Albert Whiffing, is now in India on a one-year assignment from the UN Technical Assistance Administration. Mr. Whiffing, who is chief technical officer of the Limb-fitting Centre at Roehampton, in Britain, is advising on the rehabilitation of the physically handicapped in India.

In the article below, A. K. Astbury describes the facilities available in Britain for the rehabilitation of injured industrial workers.

AN INDUSTRIAL worker who suffers injury may receive the finest hospital treatment available and, at the end of his period of convalescence, be completely cured as far as medical treatment is concerned. But this does not necessarily mean that he is able to return at once, if at all, to the work he was doing before. At worst, he may be forced to take up entirely different work, at best, he may need to train his muscles to carry out tasks, once familiar, to which they have for long been unaccustomed.



BIS

An industrial worker demonstrates a Welding Rod Holding Appliance

Thus, something more may be necessary for the injured worker as well as the best medical treatment—some form of rehabilitation which will enable him to earn his living once more as a useful member of society—and as soon as possible.

This need becomes particularly obvious in highly-industrialized countries such as the United Kingdom. There the State itself has done pioneer work in this field. At every one of nearly 1,200 Government Employment Exchanges which exist throughout Britain to place people in suitable employment at their own wish, there is, for example, at least one Disablement Resettlement Officer, whose task it is to help disabled men and women to find suitable work. During the course of a year many thousands of posts are filled by disabled workers as a result of the efforts.

Direct and Positive Action

The disabled are also helped at least two ways by direct leg lative action: every employer w has more than a certain number persons working for him must, law, find regular full-time work a proportion of disabled work and certain kinds of work—at moment, car-park and lift atte ants—are in Britain reserved tirely for the disabled.

But other, and even more p tive, action is taken by the Bri Government. For the Ministr Labour also provides facilities what has come to be called in trial rehabilitation—making a

(Continued on p. 32.)

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J. B. OLIVER, M.D., D.T.M. ASSOCIATE EDITOR

Contents

OUR COVER

The road was a ribbon of moonlight over the purple moor.—ALFRED NOYES.

Photo A. V. Ramamoorthy

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Minute Meditations

RELEASE FROM FEAR

D. A. Delafield

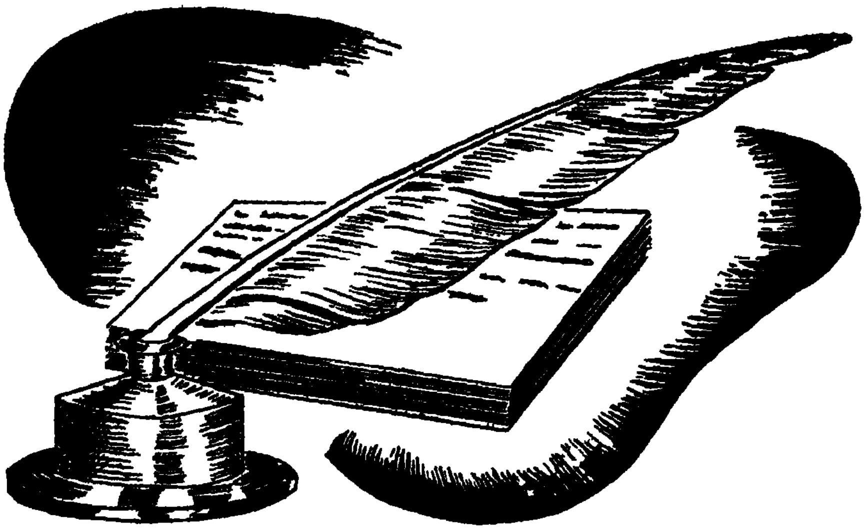
IN A commencement address delivered at Harvard University, President Conant referred to "the devastating effects of fear," and urged "the necessity of evolving a solid philosophy of life which will enable you, as educated men, to face the future unafraid." "Devastating" is an apt word and rightly describes the effects of fear upon the mind and body and heart of man. Fear is an emotional cancer, and, like that malignant growth, must be removed before its devastating work has gone too far.

Fear of people, fear of illness, fear of exposure, fear of the past and the future to say nothing of the present; fear of punishment, fear of loneliness, fear of secret sins, fear of the unknown, fear of life, and fear of death are labels over the pigeon-holes into which we file our fears.

To be sure, there is a wise and provident fear called by Edmund Burke "the mother of safety." This voice-like warning rings in our soul like a bell, to announce the approach of danger, and, like a good conscience, directs our feet away from evil. We do not seek release from this type of fear but from the unwise destructive emotion often so groundless, always so painful, that plagues the souls of men.

Fear cannot be weighed on a scale or isolated in a laboratory, but we can take it out and look at it closely. The first record of its earthly existence is found in the Bible. Adam, the first man, "was afraid," the record reads, because he was naked, and he hid himself (Genesis 3:10). The guilt of disobedience had robbed him of his robe of purity, and he

(Continued on p. 5.)



THE EDITOR SAYS

HAVE you ever heard of myopia? We say that a person has myopia when he is near-sighted or when he finds it difficult to see things at a distance but finds it rather easy and comfortable to observe things that are very near Sometimes you notice people holding a book or a paper very close to their eyes. This is usually evidence of an extreme case of myopia or near-sightedness.

There is, of course, another type of short-sightedness with which the doctors do not usually deal. It is a difficulty which cannot be corrected by an addition of spectacles before the eyes. It is a very painful condition and a condition which is harmful not only to the individual but very frequently it is injurious also to those with whom he closely associates However, it is not an incurable condition and therefore we thought that we might discuss it briefly with you today.

We say that a person is short-sighted when he is lacking in ability to look to the future and understand the far-reaching results of present acts. We say that a person is short-sighted when he is narrow in his intellectual outlook. We say that a person is short-sighted when he is selfish in his attitude. We say that a person is short-sighted when he does things for the mere immediate effect without regard to the resulting consequences of those acts. We also say that a person is short-sighted when he speaks hastily and must reap the reward of his incautious statements in days to come.

I have a young friend who has more than average ability and a very pleasing personality. He has completed his high school training quite creditably but I am afraid he is short-sighted. He could, with a little effort, go to college and obtain an education which would qualify him to become a man of more than average success in life. Instead he is seeking to find some employment for which he might qualify with the abilities and training he now has. He is looking to the present He is not looking to the future. He sees the income that he would have each month at the present time and thinks of what he could do with that. He does not look to the day when he will have a wife and a family to support and educate, and he fails to realize that the education he now has is not going to enable him in the days to come to compete with others who have the same ability but a better education. He fails to recognize that two men equal in ability but with varying degrees of education will usually vary in their ability to earn and to succeed in life. He does not realize that if, sometime in the future, an employer had to choose between him and some other person who is more highly educated but who has similar natural abilities the employer would logically select the man with the higher educational qualifications. So, I say this friend of mine is a short-sighted young man. He lives for the present. He fails to see the future. He sees today but he cannot see tomorrow. His short-sightedness is a condition which, unless he corrects it, will result in great sorrow and loss not only to himself but to those with whom he shall associate and be intimately connected throughout his life.

There are a great many people who are short-sighted because they fail to understand, or willingly ignore, their knowledge of the sure results of their present acts. There are those, who, because of a cultivated appetite or taste will eat or drink things which they know to be harmful to their bodies and which they know will ultimately bring damage and disease and suffering. They ignore those results which will be, because of a desire to live in the present; a desire to satisfy a present taste or appetite There are those who smoke merel for the present effects of th smoke. They are short-sighted They do not look to the future an realize that in the light of moder knowledge the person who smoke is laying himself open for such ser ous conditions as cancer of th lungs in the days to come.

There are those, who, in th heat of anger make statements ar arrive at conclusions, which, saner and more sensible momer after the passing of the anger, a recognized to have been fooli and unwise, but they are so sho sighted that they are unwilling humble themselves and make simple statement of apology

clear up the unfortunate condition that has been created by their hasty words.

I often think of a young man who was in some of my classes in high school. He was cautioned one day by one of the teachers concerning his mis-conduct. The boy felt that he was being unjustly dealt with, that the teacher had no business talking to him about his actions, that the teacher had no business suggesting to him that what he was doing was improper. So he decided that he would show that teacher in particular and the school in general that he was going to have a good time and could do just whatever he wanted to do. Accordingly he left the school that afternoon and went into the nearby town. He "borrowed" a large, expensive motor car that belonged to someone. He did not care whose it was. He drove that car as far as the petrol would let him go. Then he went to a petrol pump, had the car filled up, and drove off without paying the bill. He was showing that teacher! He was showing everybody at the school! He was having a good time! The result of that good time for that young man was a number of years spent in a penitentiary.

Yes, he was doing what he wanted to do, but he was too short-sighted to look to the future and realize the far-reaching results of the acts he did that day

As I suggested above there are some that are short-sighted in their intellectual outlook. We say that they are people with closed minds. They have an opinion and regardless of the evidence presented they are unwilling to change that opinion, no matter how unreasonable it may be.

I think of a man I met while travelling on the train one day. He looked to me to be an intelligent person. He was well-dressed and in many ways well-mannered. But he was a man with a closed mind. He was a man who was short-sighted mentally. So long as no one disagreed with him he was a most pleasant and agreeable individual to visit with and to associate with but the minute someone suggested an idea which was not in harmony with his own preconceived notions there was trouble and he became a most unpleasant person to have around.

Selfishness is one of the most common forms of short-sightedness. Actually if you stop to think it through, I believe that you will agree when I say that all evil is primarily the result of short-sighted selfishness.

The person is short-sighted who looks to the immediate effect rather than to the permanent result. I know a person who wanted some beautiful furniture made for his home. He went to a carpenter who had a reputation for producing excellent quality furniture. He showed the carpenter the patterns he had and he told him the kind of wood he would like to have used in making the furniture. They talked over the matter of costs. Then this gentleman asked the carpenter how soon he could expect to have the furniture. The carpenter inquired of some of his assistants and after mature consideration told this man that it would take a little over a year for him to be able to supply the furniture that was specified. The gentleman became very much upset and said that it was unreasonable that it should take that long. He wanted it much quicker than that. He was going to have some guests at a certain time and he wanted his furniture to be in his bungalow by the time those guests arrived. The carpenter shrugged his shoulders and smiled and said, "I can supply you the furniture by that time but you will not be satisfied with it. It will look all right. It will look just as good as the other furniture that I would deliver to you in a little over a year. But you will not be satisfied with it The wood that I would have to use for the furniture that I would give you immediately would be unseasoned, green wood, while the furniture that I would give you in the future would be made from seasoned wood—wood that would give you no difficulty later on and would result in furniture of which you could be proud for many, many years to come." Regardless of that the gentleman ordered the furniture to be delivered within a month and when his guests were there he received many compliments on the beautiful furniture that he had and he was very proud

(Continued on p. 32.)

Release from Fear

(Continued from p. 3.)

was afraid of the consequences, so he hid himself from God. There is no better record anywhere of the genesis of fear. First there is guilt, then fear, then the flight from God.

But the original experience perpetuates itself in human history. Men today are still afraid because of moral nakedness, and they are trying to get away from God. True religion has the answer to this problem of fear. Its function is to lead men back to God—to assure the human race that God is love, and that although evil is offensive to Him, men who sin are fully accepted if they come confessing, believing, and forsaking their wrong-doing. No man who has ever done this sincerely has been disappointed. Millions will testify that there is release from fear in coming to God. The best psychiatrists, the keenest psychologists, and the wisest philosophers recognize this cure for the cancer of fear. It is therefore a sound philosophy of life to accept the principle that fear is born of guilt and that peace is the fruit of trust and confession and right-doing. Perhaps this is what President Conant meant when he spoke of "a solid philosophy of life" which would enable men "to face the future unafraid."

THE STUDENTS' GUIDE

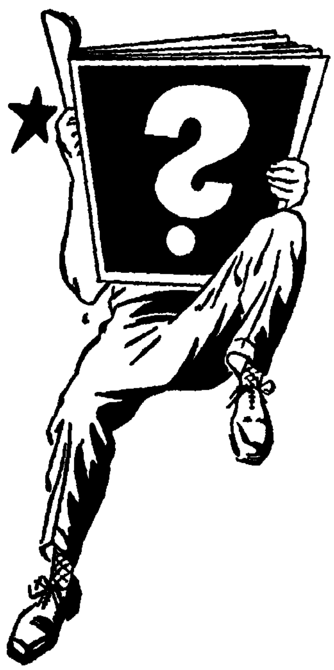
QUESTS AND QUESTIONS

WHILE looking through a shelf of books the other day, we noted one that had a rather arresting title. It was called "Youth With a Capital Why" While we did not take time to read the book, we did glance through it and found that the author was endeavouring to show how to answer some of the "whys" of youth. The title set us thinking and we thought that we would pass on a few of our thoughts to you in this page this month.

At our house there is a little boy who has a wonderful ability for asking questions. From the time he has been able to talk until now when he is a little over ten years of age, he has persistently and perpetually been asking "why?" Frankly, we find many of his questions a bit difficult to answer. Actually some of the questions he is capable of asking, we are incapable of answering! He seems a bit disappointed, perhaps disillusioned when "daddy" cannot answer a question he can ask. Sometimes when we have said that we do not know the answer he has come back with "Well, why don't you know?" seeming to assume that we must know all the answers to all the questions that he could ask.

Sometimes parents become exasperated with their children for asking so many questions and tell them to "hush up," whenever they ask. However, that is not too good a practice because if children are continually discouraged from asking questions, they have a tendency to stop asking them and that inevitably results in a type of mental inertia that is very difficult to overcome when the child gets on into the years of high school and college, when of all people on earth, he needs to have an inquiring mind.

If it were not for the "whys" that are asked by alert people, this world would be a very drab place to live in. Somebody once wondered *why* we could only use candles for light, *why* there was not something better and then another



kind of lamp was invented. Then after electricity was discovered, somebody got to wondering *why* we could not use electricity for lighting our houses and streets. So another form of illumination came into being. This, of course, was preceded by the use of gas for lighting purposes, because somebody else had a *"why"* in their mind that they had answered. Radio and television are answers to *"why."* The telegraph is the answer to somebody's *"why."* The cars that speed down our highways and clog our busy thoroughfares and the thousands of inventions that have helped to produce the modern motor car are all the results of someone having asked the question *"why"* and having pursued that question until the answer was found.

Anyone who is worthy of the name of student should stimulate his thinking, should stimulate his questioning and then when he does ask a question, when a query does come to his mind, he should not be content until he has found the answer, until he has solved the puzzle, until he has the satisfaction of knowing *"what"* instead of *"why."*

Too often education consists of the teacher making a statement or the lecturer propounding some fact and the student writing it down in his note book somewhere. Then just before examination time he studies through his notes. He tries to get the fact in his memory again and then he repeats that same statement to the professor at the time of the examination and as a result he has "achieved success" educationally.

To our way of thinking that i the height of nonsense. We believ that a teacher has utterly failed i the achievement of his task o earth if he does nothing more tha to enable pupils to *re-cite* what h has *cited* to them. The teacher wh succeeds is the one who stimulat



he questioning mind of the youth vith whom he has the privilege to ssociate. The successful teacher ot only stimulates questions and ncourages them but endeavours o assist his students in solving the roblems that are raised or in seekng solutions to the questions that volve out of the routine study of he various subjects that are taught n the school.

For example it is not sufficient o teach the fundamentals of civics ut it is absolutely essential that vhen the subject of civics is being aught, the students be encouraged o ask questions as to *why* this form f government is better or that orm of government is better; *why* his system is better than that system and to seek and search until hey have found the answers. Only hen can those students develop nto intelligent citizens of their ountry. In the teaching of physiolgy and hygiene and sanitation, it s not sufficient simply to teach the tudents that there are a certain umber of bones in the body and hat they are located in certain laces and that there are certain nuscles that have certain attachnents and that there are certain erves and that they resemble a elegraph system and all that sort of thing. They need to be encourged to think, to ask questions as o why there are a certain number of bones, why there are certain nuscles, why they are attached in he way they are, why the nervous ystem functions as it does, how to eep the organism in the best conition, why we should or should ot eat or drink or do certain hings, why a certain amount of est is essential to the body, what he affects are of drugs and narcotics and things of that nature upon the body.

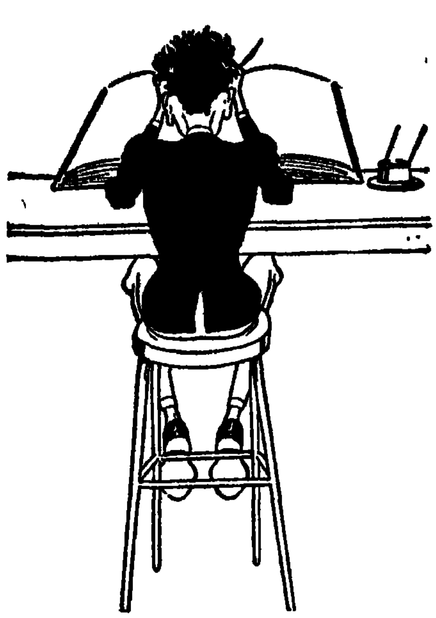


Why? You see, that is a most important question, because the answer to that question will affect the entire life of the individual. Too frequently we have seen people who have received a good education, who have even specialized in some course of study which has to do with the care or the maintenance of the body and yet we have found those people suffering from diseases or physical conditions or mental conditions which have been brought about, because of the fact that the individual himself has not known *how* or *why*, so far as his own body was concerned. He has known the theory, he has known the principles as they were propounded in some text-book and he has passed the examination, but the practical personal application



of those principles has not at any time entered into his process of development and training. Therein his instructors have failed, because education if it is successful must first of all be personal and practical.

And then, there are questions concerning life and society and those things that take place in the world about us. Why is it that so many of us do not know anything about our own people, about our own society, about our own culture, or about the culture and customs of those with whom we live? We well recall one evening a few weeks after our arrival in India, when we heard the drums beating and saw a procession being taken out. We asked the bearer what it was all about, he very respectfully smiled and said, "Saheb, I do not know." So we asked the house boy. He being a younger person said,



that he did not really know what it was but he knew it was a Muslim festival and that they were going to take that thing that they were carrying and throw it in the tank. We decided that we would go and see and so we mingled with the crowd that evening to watch the procedures. Repeatedly we asked people what it was about, —what this meant, or what that meant, or why they did this or why they did that and the people would smile and very politely say, "It is the custom," or "They do it that way." But why? No! We could not find the answer to our question "why." When our language teacher came the next day, we asked him about it and he said, "Well, I do not really know, but I will try to find out for you" and when he came back that afternoon he had the information that we had so greatly desired.

Why is it that we are so willingly ignorant of those things that go on about us? There is so much of great interest that happens continually in any community, if a person is only alert and questioning and is persistent enough to get the answers to his questions.

Anyone who is worthy of the name student must be perpetually seeking for the answer to the question "why?"



These bees have produced something besides honey—a beard!

Have You a Hobby?

OWEN S. PARRETT

WHAT is a hobby? Something you take an absorbing interest in, says the dictionary. A few people find their job very interesting. The late Henry Ford must have found the automobile of absorbing interest. What started as his hobby became a business of staggering proportions. A New Yorker by the name Young started playing with orchids, and kept adding to his collection until finally it became a business on so large a scale that he sold out to Wall Street bankers for some three million dollars. A woman in the East baked a good loaf of bread from freshly ground entire-wheat flour. Friends asked for it, and today one can buy it fresh, flown as far south as St. Petersburg, Florida.

Perhaps at your time of life you may hardly plan on a hobby putting you into big business. Such a programme might take the fun out of your leisure hours or rob you of all leisure hours. A hobby is important for you just the same.

A hobby will do two things for you. If you are still in business it will ease the tension of your workaday world. It will ease you into a happy existence if and when you retire from your regular business It may add a little to your shrinking income. I knew a retired minister whose hobby was growing orchids. He told me that the income from the sale of his flowers exceeded the salary he received before retiring.

I have many hobbies, some of which I will share with you. My first hobby is keeping physically fit. I meet spry old gentlemen of eighty-five who are still hale and hearty, find life very interesting, and can still do a day's work if they wish. Their mind is keen, and their step is quick and firm. Seldom does such happy longevity just chance to happen. It results from a little planning. I don't want to get old and stiff and tap the sidewalk with a cane, and neither do you.

I share this hobby with my patients, and tell many of them how they too can arrive at old age still young in mind and body.

I find flowers of great inter
Five minutes three times a
spent in a greenhouse full of orc

oes something to you. Flowers nile at you, and they never have n ache or a pain.

Next to your garage a bed of alvia and purple sage attracts all inds of insects and hummingbirds. I have counted eighteen big yellow umblebees on the flowers at one ime. I find butterflies of different olour and varieties, some Italian ees, and hummingbirds. I am still rying to get a close-up shot with ny new camera of one of these eautiful little birds. By the use of pecial lenses I hope to accomplish ny aim.

Two hives of bees kept at the nountain home of one of my office urses furnish our table with deliious comb honey, and recently I old enough honey from these two ives to donate a good amount a worthy cause.

Bees are about the most interestng little creatures in the world. Perlaps you think that bees were just nade to sting you if you give them chance. Quite the contrary, they re usually harmless and docile and ting only when they feel it is a natter of defending their hives. I vould miss a meal to look inside beehive and watch the well-oranized family at work.

Did you ever try to grow beautiul tuberous-rooted begonias from eed? It is pleasant and easy. Every pring I grow so many I hardly ave room for the potted plants. Of course, the best climate for hem is where it is damp and ool. They also will grow quite ell in drier climates if you keep e surroundings damp and protect em from too much heat.

Start your hobbies while you are ll employed. As the time to retire mes you let your hobbies absorb u so completely that life contines to be vitally interesting.

An elderly woman in my office marked that she loved to move o new homes and to new places. o you know that most elderly peoe cannot bear to move? It is hard transplant an old tree. Here was a woman who had been transplanted so many times that she grew to enjoy it.

May I suggest that you get busy and find a hobby if you don't already have one. Better yet, get two or three hobbies. There's nothing like a variety of them to keep you young. They give you something worth while to talk about, think about, look at, and do. If you try painting, your pictures may not get first prize, but they will be your own; they will interest and delight your friends. They will be an expression of your enlarging horizon. They will keep you young. So long as life is intensely interesting you are never old.

HOW TO QUIT SMOKING

J. DeWitt Fox

THE big dividends you'll reap when you quit smoking are pointed out in the book *How to Quit Smoking*, by Herbert Brean (published by the Vanguard Press, New York).

When you stop smoking, says Mr. Brean, you'll reap the following advantages:

1. Your teeth will be cleaner, your dental bills less.

2. The yellow stains on your fingers will disappear.

3. When you get up in the morning your mouth will not taste like the inside of a motorman's glove You won't find your throat clogged with phlegm, and you won't find it necessary to cough or clear your throat so often.

4. Your food will taste better, because you are no longer flooding your taste buds with 800 mouthfuls of harsh smoke each day—smoke that contains nicotine, which deadens nerve endings and taste buds and prevents your food enjoyment.

5. You will begin to smell again Flowers and food will take on a new appeal. Your nose, throat, and lungs will not be permeated continuously with smoke and its residue, ashes.

6. You will feel less nervous after the first few days. You will be calmer, more poised. This will help you to have more energy, get more work done.

7. You may lose the little heart flutter that has been bothering you.

8. You will have fewer colds, and your chronic sinus may lessen or clear up entirely.

9. Your indigestion and heartburn after meals may vanish, for nicotine stimulates stomach acids.

Mr. Brean says that the reason many people begin to smoke is simply for social prestige.

Youngsters start the habit to emulate their elders—parents, brothers, or sisters. They want to be in the sophisticated, smart set in high school. Smoking is regarded as an adult habit, and once a child begins to smoke he feels grown up.

In summary, Mr. Brean steals some steam from the eminent Harvard psychology professor, William James, on how to break any habit, which amounts to: Develop your will power and stop. But he adds, you must start your campaign with momentum; fight each temptation as it occurs; replace the bad habit with a good one.

To our way of thinking, the best way to stop is never to start. If youngsters were taught to emulate clean-living athletes, we would have a healthier and happier nation. It is appalling that in America the cloud of tobacco smoke costs at least $4.5 billion in a single year and amounts to twice what Americans spend with doctors to improve their health.

Campcrafts and Skills

DAVID I. SHAW

TWO young campers struggling to start a fire one damp morning achieved only billows of smoke. Their hopes of breakfast were disappearing when an old-timer approached and asked whether he could be of assistance. Pulling out charred pieces of soggy wood and re-building the fire, he soon had a cheery blaze going.

There are many necessary skills around a camp, and building a fire is one of them. Not everyone can build and maintain a fire in the open, especially in unfavourable weather, without instruction.

Some campgrounds have fireplaces where fires may be built without danger, but every camper should know how to build an open fire. Many beginners have too large a fire. A small brisk blaze well under control is much better than a big fire for cooking. The first step in building an outdoor fire is to clear an area larger than the fire. Remove all grass, roots, and vegetation with a shovel or hoe. Fire spreads readily if there is any mould or fibre for it to feed on. If there is a wind, the fire should be laid in a trench or pit.

To start a fire, make a little pile of easily combustible material, such as dry bark, or dry twigs. Over this build a pyramid of small dry sticks, leaving enough air space for a draft to work up through. Have a supply of wood ready to feed the fire when it is burning well. Some kinds of green wood burn fairly well, but dry wood is more dependable. The wise camper always keeps a few pieces of dry, soft wood handy to encourage stubborn fires. Some folk break a wooden box into small pieces and keep the supply in a place where it is sure to remain dry. Apply the match to the bottom of the pile of tinder.

Building a fire in the rain is quite a test of skill. The fuel should be dry and must be sheltered from the rain until the fire is well started. A piece of bark or a flat stone could be used to shield the fire. If no dry wood is available, take an axe and split the driest wood you have into small pieces. A candle stub is often used to start fires in rainy weather.

Seasoned campers avoid kerosene, because it may be dangerous. The smell often permeates food, clothing, and camping equipment. If the heads of matches are dipped in melted paraffin they will be waterproof.

When you finish with the fire, always put it out completely by pouring plenty of water on it and scattering the embers around so that they will be thoroughly wet Never leave a fire burning untended. Many forest fires are caused by smouldering embers.

Every camper should realize the importance of a safe water supply When there is any doubt about the purity of the water, boil it. Never take chances with drinking water. To sterilize water, boil it vigorously for five minutes. Shake it to restore the air. This makes it taste better Water purifying tablets can be bought at chemists' shops. Place them in the water, and if possible allow it to stand for a time before use.

Burn or bury all food refuse. The experienced camper is careful to keep everything about camp clean In the open flies and insects readil spread disease germs. Dishes shoul be rinsed in hot water after eac meal.

If no sanitary facilities ar provided at the campground, way to dispose of body wastes mu be found. If a camp lasts only day or two, a fairly deep hole d in the ground will be sufficient. quantity of earth is thrown in aft use, and the hole filled up wh leaving. When the camp is to l longer, it is advisable to constr a toilet a short distance from camp. Dig a trench sufficien deep so that dirt or lime can thrown in after each use. You

itch a tent over the toilet or fasten . tarpaulin overhead.

While at camp you may want to ry a little craftwork. You can ften make useful or decorative rticles from pine cones, bark, nuts, iells, odd-shaped branches, drift-ood, bracket fungi, and other odd-ients. Bark, especially from the irch tree, lends itself to a variety f articles.

Bark, just as most basket aterials, such as reeds and grasses, eeds to be wet before being orked. When soaked, it can be it, folded, bent, and sewed. A few ticles that can be made are cture frames, baskets, dishes, othpick holders, bookmarks, toy noes, waste-baskets, and drinking ips. A match holder or a tooth-ck holder can be made from a ip of birch bark about two and half by five inches with the grain the bark running the long way. 'hen making a birch basket, hittle or saw a piece of thin wood r the base. Overlap the bark, and ue or sew it onto the base. You n use a thin strip of reed or rk to reinforce the top edge. ake the sides of four tapering eces of bark the same size, fasten gether.

A large number of articles can made from wood. Among them whistles, walking sticks, rustic ns, letter openers, lamp-stands, t shakers, and rustic furniture. welties can be made from un-ipped round wood. Slabs of od with the bark left on make eresting flower boxes, bird uses, rustic boxes, and furniture In the spring and summer you n make balsam pillows by strip-ng the fragrant needles of the lsam fir and stuffing them into lows of stout fabric, which may decorated with appropriate signs.

Whittling, an old-fashioned ift, is enjoying a modern revival. ive you admired the realistic nd-carved little figures, birds, d animals in gift shops? You might be surprised how well you could do at whittling. You need a keen-bladed knife, sandpaper, paints, and a supply of dry wood free from knots. The grain of the wood should be considered when planning the project. In making upright animals the grain should be vertical. For most birds, the grain should be horizontal. The first step in carving objects is to make a good pattern.

Get in a bit of practice at camp-crafts, and you will find yourself enjoying camp life to the full. At first you may feel somewhat left-handed, but it won't be long before you are swinging along with the best. Use good common sense to care for all emergencies.

MYSTERY OF LIFE'S ROUTINES

H. M. Tippett

MY six-year-old grandson came in one morning from playing with a half-dozen children in our block obviously irritated about something After finding that pouting brought him no sympathy from his mother he blurted out, "Mamma, I'm not going to play with Cynthia any more. When we play church she always makes me do all the worshipping."

Little Craig resented the routine role he was expected to play at the bidding of his much-admired play-mate next door. He rebelled at being only one of the worshippers in the pews of their playtime church. He had ambitions to be precentor and direct the music, or at least a vestry-man and take up the offering.

Although he couldn't realize it his reaction was typical of millions of adult pouters and complainers who find their role as performers of undistinguished routines unbear-able.

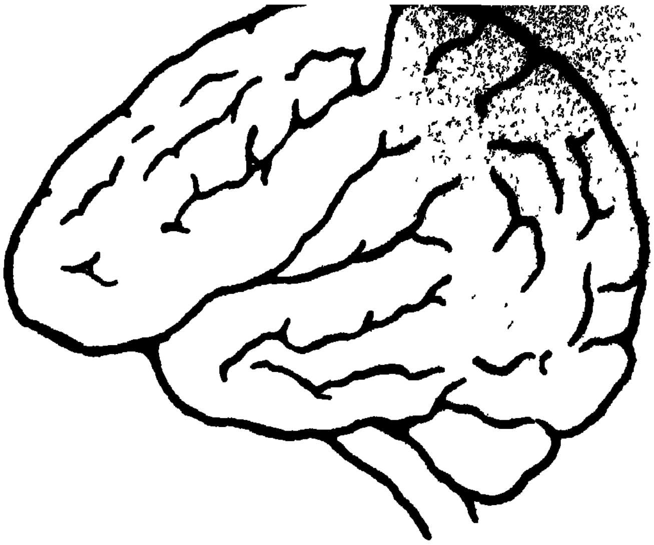
Ambition for attainment and aspiration to honour and prefer-ment are not to be decried. Some-one has pointed out that all human progress may be credited to the "divine discontent" that urges the human spirit toward lofty goals in scientific and spiritual discovery.

But advancement does not come to those or through those who despise the duties of the passing hour. The creative impulse that makes men aspire to better things, if applied to each job at hand, would make all human service shine with a new splendour. The lake-boat fireman who sang his way through the day's chores had the right idea:

"Oh, you gotta have a glory in
the work you do,
A Hallelujah Chorus in the heart
of you.
"Paint or tell a story, sing or
shovel coal,
You gotta have a glory or the
job lacks soul."

Nothing wins the praise of men or the approval of Heaven quicker than an assigned task completed with all the skill and artistry the worker can muster. Such mastery puts a silver lining on monotony and a halo on the head of care. It makes a stone-mason a Christopher Wren, and a store handy man a John Wanamaker.

Despise not a seat among the worshippers, for "by beholding we become changed"—ministrants of glory such as Saint Paul, who turned trial into triumph because he "was not disobedient unto the heavenly vision."



E P I L E P S Y

AMIL J. JOHNSON, M.D.

AS FAR back as the ancient Greeks, there are records of people being suddenly seized with uncontrollable convulsions, after which they fall to the ground frothing at the mouth, sometimes with blood intermixed from having bitten the tongue, and pass into unconsciousness. The word *epilepsy* (of Greek origin) means "seizure." Hippocrates (*c.* 460 B.C.), the "Father of Medicine," lived at a period when this condition was called the falling disease, the holy sickness, or the sacred disease. The people thought that because a person was uncontrollably afflicted he was dominated by the gods. Because he was considered so sacredly imbued, he was accorded a position of respect and proffered the highest honours among men.

Convulsive seizures are of two broad types—the tonic and the clonic convulsions. In tonic cases the muscles draw tense and remain in a state of contraction until the seizure is over. In clonic cases there is a more or less relaxed flailing of the arms or throwing about of the legs; the characteristic of such seizures is an inco-ordinated tossing about of the entire body. In any case, the stimulus initiating the contractions arises in the brain.

What happens that the brain starts such purposeless muscular contractions? Convulsive contractions can be produced experimentally by electro-stimulation of nerve centres in the brain. Sometimes pressure from a plate or bone after an accident will produce a stereo-typed contractile pattern. Sometimes tumours will do likewise, and swellings and pressures have done similarly. Such convulsive responses, always repeating in the same pattern from a definite focal irritant, were long ago described by John Hughling Jackson. They are called jacksonian epilepsy.

Convulsive seizures in infancy are thought most likely due to birth

...the injury, haemorrhage, and some cases congenital defects. ...spasms, or convulsions, of ...dren with stomach and intes...al conditions are not too ...isfactorily accounted for, but are ...ssibly due to an oedema (swell...g) of the brain.

The focal convulsions of adol...cent and middle-aged people are ...ost commonly due to injury and ...essure or brain tumour. In the ...ed the most common causes are ...mour pressure or hardening of ...e blood vessels (arteriosclerosis), ...th resultant changes in the por...n of the brain supplied by the ...sel affected.

In about 75 per cent of all ...ileptics the real cause is un...own. Almost all such cases ...rted before the patient was ...enty-five years of age—in fact, ...y few cases of unknown cause ...e after the age of twenty. As ...ny as 85 per cent of such cases ...e the *grand mal* type of convul...s, and 15 per cent have the ...t *mal* and jacksonian types. In these brain conditions a person ...a split second can be so com...ely transformed from a normal ...dition to a violently pathological ...that it is quite dramatic.



Grand mal is the most violent type of epilepsy. A convulsive seizure of this type is usually preceded by some warning, known as an aura. It may be flashing lights, muscular twitchings, or spectral colours. The true attack strikes with such suddenness and violence, however, that the victim is not aware of the attack.

A good many years ago I saw a young girl who was coming down some steps when her attack struck. Somehow she grasped a hot steam pipe with both hands, and before her attack had subsided sufficiently for her to relax, the insides of both hands were severely burned.

In a typical *grand mal* attack the victim falls to the ground in convulsions, foam coming out of the mouth and teeth clacking as the seizure affects them. Often the tongue is caught between the teeth and bitten so severely that blood exudes with the foam. After some five minutes, consciousness begins to return, and the patient realizes what is happening to him. He is likely to drop off into a sound sleep, quite exhausted. Headaches are frequent with *grand mal* attacks.



An attack of epilepsy may strike at odd times.

Petit mal episodes have characteristics that differentiate them from the *grand mal* type. They have no premonitory symptoms, or auras. The patient seldom falls, and may not even be aware of the attack. The episodes may occur many times a day, none with injurious effect, apparently. They lessen with increasing age, and are rare in persons more than twenty years old.

Various kinds of *petit mal* attacks differ in their characteristics sufficiently to be classified. The most common type occurs in 70 per cent of cases, and is called the pykno type. It is not a true epilepsy. It is the sudden hesitation, staring type. There is a sudden immobility, or fixation, followed by an abrupt resumption of activity. The patient as a rule is unaware of the event, and he seldom falls. Stress and exhaustion tend to precipitate the attacks, and they are more prone to occur in the morning before patients get going well.

The second type of the *petit mal* is the akinetic. As suggested by the word, there is a sudden loss of tone or power in the muscles. The head drops onto the chest, the body jacknifes upon itself. and the knees give way, letting the body fall to the ground.

The third type of *petit mal* is the myoclonic. It is typified by sudden muscular contraction. There may be lightening-like jerks of the arms or head, but without loss of consciousness.

In addition to jacksonian *grand mal* and *petit mal* epilepsy, there is the type in which the victim

(Continued on p. 32.)

SALK VACCINE

A Progress Report

(Concluded)

Although research in new poliomyelitis vaccines continues, the present serums have proved more effective and longer-lasting than anticipated.

MARGUERITE CLARK

DURING the winter of 1953-1954, six American drug companies—Eli Lilly, Parke-Davis, Pitman-Moore, Wyeth, Cutter and Sharp & Dohme—were licensed to manufacture the vaccine. On April 12, 1954, the Vaccine Advisory Committee, established by the National Foundation for Infantile Paralysis, recommended field trials for 1,830,000 children in forty-four states—the largest mass experiment of this kind ever undertaken. By the time the trial started, Dr. Salk had successfully vaccinated some 9,384 children and adults The first shots of the mass trials were given on April 26 and the last on June 15.

Then began the long, slow wait for the report of the Polio Evaluation Centre, headed by Dr. Thomas Francis, Jr., of the University of Michigan. On April 12, in a melodramatic ceremony at Ann Arbor, Dr. Francis announced that the Salk vaccine was undeniably safe and effective against paralytic polio. The effectiveness was estimated at 72 per cent. The next morning, the approved vaccine was rushed by planes and trains to all parts of the United States.

Never before in the history of medicine had a vaccine, or any other important new drug, been available for public use the day after its approval by health authorities. The first great antibiotic, penicillin, was subject to government control and was rationed in limited amounts to a series of hospitals. Cortisone and ACTH were in such short supply when first announced for the relief of rheumatoid arthritis at the Mayo Clinic (Rochester, Minnesota) that some of the first patients had to stop treatment until more drugs could be made. Control of the famous blood fraction, gamma globulin, which gives immediate but not permanent immunity against crippling polio, had to be taken over by the government and distributed through state health officers.

In spite of the carefully planned allocation programme for the Salk vaccine, tragic confusion arose. When the vaccine for an established programme failed to arrive on time in some cities, frantic mothers and fathers descended on doctors' offices and clinics, demanding shots for their children. Resentment soared against the drug companies that produced the vaccine, against the medical profession, and against the Foundation that backed the Salk research. Irate citizens complained of vaccination postponements to their mayors, governors and Congressmen. Congressmen, in turn, introduced bills that could clear the way for prompt free vaccination programmes for all their constituents' children.

Critics of the Salk vaccine programme have claimed that the public was misled by over-enthusiastic publicity, that they were allowed to expect too much. To the contrary, at Ann Arbor, the public was given the true facts about the vaccine. If parents failed to understand the limitations, it was because they were reading into the reports what they wished to believe. Once again, the very nature of polio, with its power to wither limbs and twist young spines, had created mass terror that was out of all proportion to its incidence and death rate. The odds against anyone getting polio is almost 500 to one. Of those who do contract it, 50 per cent recover completely; about 30 per cent are slightly paralyzed, 14 per cent suffer severe paralysis, and about 6 per cent die.

In April of 1954, with a new vaccine available, American parents were taking no chances with the great crippler. A man seemed proud to say, or claim, that he had been able to protect his children. Less than two weeks after the Ann Arbor announcement, a series of tragic incidents changed the whole aspect of the Salk vaccine programme. The mood of the American people turned from one of deep relief and rejoicing to mass fear. Poliomyelitis had broken out among children who had just been vaccinated with two lots of vaccine prepared by the Cutter Laboratories at Berkeley, California. Scare headlines in the newspapers terrified American parents.

Overnight, a group of Public Health Service virus experts flew to California to investigate the Cutter vaccine. As the days passed, more children came down with

lio after inoculation with vaccines prepared by other drug firms. overnment health officials stood rmly behind the Salk vaccine. he vaccination programme, they nnounced, would continue, but ithout the Cutter products.

In cold figures, the post-vaccinan polio scare never was as bad the newspaper headlines sugsted. From the start of the proamme, authorities repeatedly had rned parents that no vaccinan programme could prevent all ses of the disease against which s directed. In his report at Ann bor, Dr. Francis had emphaed that the Salk vaccine, as used the 1954 trials, was 60 to 90 cent (average, 72 per cent), t 100 per cent effective.

Before the vaccine programme gan, medical experts had anticited an attack rate of one-andhalf per 100,000 children vacnated. This estimate was based past experiences with largele inoculation programmes. The lk vaccine record turned out to much more favourable. The atk rate, exclusive of the Cutter ccine cases, was less than a lf per 100,000—only one-third the expected risk. Later, it was vealed that small lots of the vacne made by Cutter contained live uses which gave the disease to out of an estimated 10,000,000 ccinated children. Production of vaccines slowed down and ally came to a halt.

What, anxious parents wanted know, had caused the trouble? e answer came at the annual eeting of the American Public ealth Association in Kansas City November 1955. Dr. Alexander ngmuir, chief medical intellince officer of the U. S. Public ealth Service, laid to rest most the fears about the Cutter decle.

The presence of live virus in ne of the early lots of vaccine s caused by technical difficulties the manufacturing process, and not in the Salk concept, the government official said. The trouble arose from the manner in which the drug manufacturers strained, or filtered, the solutions of live viruses. This filtering is done before the viruses are exposed to a lethal bath of formaldehyde, to kill all the viruses used.

In some batches, the experts explained, the filtering perhaps was too coarse, or was performed too far in advance of the formaldehyde bath. The solution became cloudy, sediments were formed, and the sediments contained clumps of live polio virus. The viruses inside the clumps could not be exposed to formaldehyde, and so managed to survive the lethal bath. To solve this problem, all vaccine solutions are being filtered several times during the processing so that all virus particles will be subjected to the heat-formaldehyde treatment.

As another precaution, the drug manufacturers now are testing the vaccines on monkeys made more susceptible to the polio virus by injecting them with cortisone. Also, improved sampling techniques are strengthening the tissue culture tests and complete plant records are being studied by virus experts as a follow-up on released vaccines.

All these improved filtering techniques and timing methods have been put into effect by the drug companies making the vaccine, the government representatives reported. All batches of vaccine re-

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DISCLOSING that one-fourth of all cases of polio in the United States occur among persons aged twenty to fifty, Dr. Jonas Salk warned last November that polio is striking hard at adults now. Therefore he recommends persons up to fifty years of age take shots of polio vaccine.

"There need be little, if any, paralytic polio in the United States in 1957," declared Dr. Salk, "if all who are potentially susceptible are treated with the vaccine that is now available." The potency of the vaccine, he stated, has been increased and made more uniform.

New shots should be given to any children who had three shots within five weeks' time, or got the first two shots within less than two weeks, or who received a third shot less than seven months after the second dose.

Polio shots should be given to babies much like shots against diptheria, tetanus and whooping cough. The baby should get two shots two to six weeks apart, with the third seven months or longer after the second.

Miss Elsie Ward of Dr. Salk's laboratory has discovered a perpetuating strain of monkey heart cells. This strain of heart cells grows continuously. It is able to supply enough cells to make millions of doses of vaccine and can grow all the virus needed for testing vaccine for safety.

Formerly monkey kidneys were used as the cells on which to grow and harvest crops of living virus for the vaccine.

Don't Blame Others for Your Illness

CLIFFORD R. ANDERSON, M.D.

A doctor speaks out about a troublesome patient who thought doctors were no good. She was the cause of her own illness.

SHE was deeply worried. For several days she had not been able to eat any food. Her face was drawn and twitching, and her lips were trembling as she said: "If only that doctor had not given me those pills! I am sure they were the cause of all my troubles. I was perfectly well before I took that medicine. And now just look at me! I am a physical wreck."

"How long ago was it that you took those pills?"

"About four months ago."

"Did you go back and see your doctor again?"

"Yes, I went back the next week. But after that I decided not to go any more. I thought I would try some other medicine that the lady next door has been using. It seemed to do her a lot of good. I felt sure it would help me."

"Did that medicine help you?"

"No, it just made me feel worse."

"What did you do then?"

"I tried some other pills that someone else recommended."

"And they did not help you either?"

"No, I just felt worse and worse."

"Why didn't you go back to your doctor?"

"I thought I'd save the money. You know, living is not too easy these days, doctor."

"That's true. But your health is important. Why would you want to take a chance on that? Tell me, are you feeling any better now than you did four months ago?"

"I am much worse. I have lost nearly twenty pounds in weight during the past few months. I have no appetite, and now I can't sleep. What am I going to do?"

"There is no question about your needing some help. But let us go back to the beginning of your illness. Are you sure you were 'perfectly well' before you took those pills the doctor gave you?"

"Oh, yes, doctor, I was feeling *fine—except that I had a nasty skin rash and also some pains in my stomach. And, of course, I have always had some trouble with hæmorrhoids.*"

"It seems to me you were a rather sick woman when you went to see the doctor. You could hardly say that you were in good health, with all those troubles that you have just mentioned."

"Perhaps I was not too well, but I'm sure those pills were to blame. I think doctors should be far more careful in what they prescribe for their patients."

"Maybe you are right. But let's not blame the doctors for *all* of our ills. Sometimes the trouble may lie within ourselves, especially when we start taking medicines that have been prescribed for someone else! A medicine that may help one person may be of no benefit whatever to another. Taking someone else's medicine, in the hope that it may help you, is always a waste of good, hard-earned money. Such medicines may do you more harm than good."

"But don't you think those pills were the cause of my troubles, doctor?"

"No, I am sure they were not. You were a sick woman before you saw the doctor. And then instead of following his advice, you decided to try to treat yourself. What else could you expect?"

"But doctors do make mistakes at times. I know of several—"

"Yes, yes, I've heard those tales



: physical discomfort was largely due to the constant nervous tension under which she lived.

e. Let's not waste time on now. Doctors are only ın, after all. But most cians are perfectly honest. ' have the interest of their nts at heart. They work long s and carry many heavy ınsibilities for those under their

Well-trained doctors are not erately trying to poison their nts. They want them to be and happy, and I am sure this the case with your doctor, too. et's forget all about those pills get down to the problem of t is really making you sick, , we?"

Yes, doctor, I'll be so glad if someone could find out the cause of my trouble. Maybe it was not those pills after all."

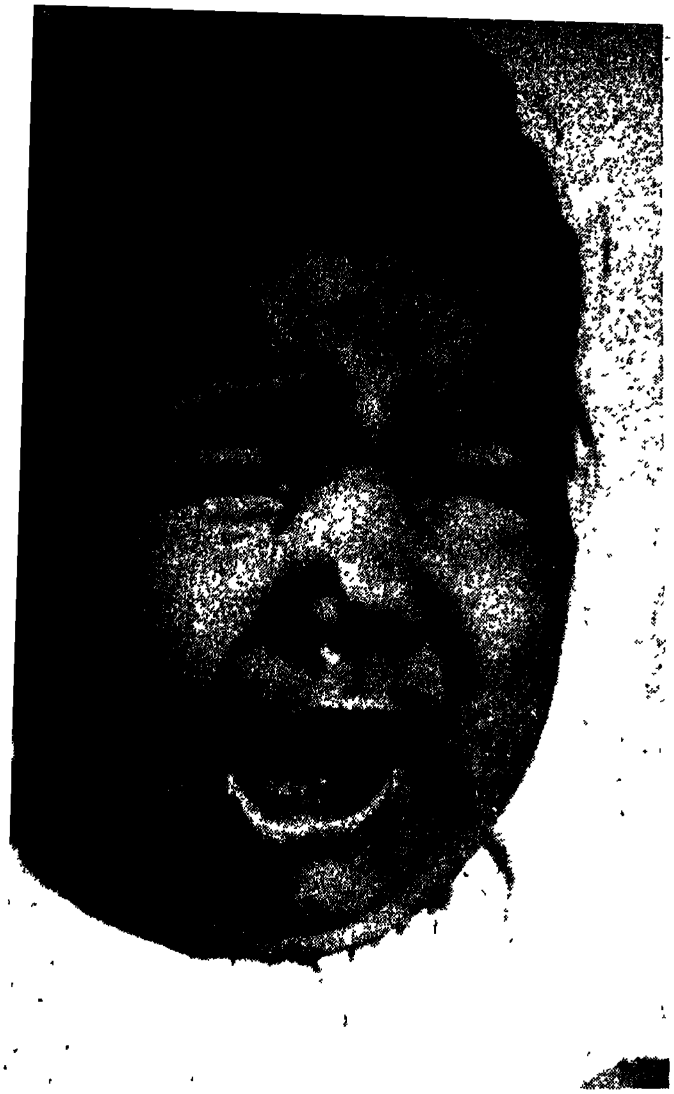
"I am sure you're right. So many patients foolishly try to blame some poor doctor or someone else for all their illnesses, when the real trouble lies within themselves."

This lady had talked so incessantly about "those pills" that in the end she and her whole family had come to believe that her doctor had poisoned her. The only medicines he had prescribed were a few vitamin pills. These would certainly not do her any harm. Because she was run down in health, I advised her to remain in a hospital for several weeks, so that her condition could be more closely observed. After a time she began to forget her obsession about the pills and to concentrate upon the cause of her illness. A thorough physical examination showed that she had lost considerable weight, as she had claimed. But nothing very serious was found. An X ray of her entire gastro-intestinal tract revealed a moderate amount of gastritis, which was causing some abdominal pain. Aside from this, her physical condition was fairly satisfactory.

What was the cause of this lady's troubles? It was some time before the full story came out. She was sick mainly because of a hidden nervous break-down. Her physical discomfort was largely due to the constant nervous tension under which she lived. Even as a little girl she had always been tense and unable to control her feelings. She was never sure of herself. Her married life was unhappy because she had never learned to grow up. When things did not go her way, she would promptly throw a temper tantrum. Early in her marriage her husband became rather tired of this attitude, and after a time he turned to someone else for companionship, although he continued to live with her. Both of her children were unhappily married. The daughter came home to live with her mother. The son, who had always been the centre of her affections and interests, took to liquor as a way out of his troubles. Soon he became a confirmed alcoholic.

As time went on, she became more and more bitter with life. As a young woman she had been rather pretty, but now the lines of disappointment were deeply etched all over her face. All her life she had been looking for a scapegoat. First she blamed her parents for her troubles. Then it was her teachers at school, then her brothers and sisters, and then her husband and children. But she could never see that *she* was her own worst enemy. She worried constantly about everything in general and nothing in particular. She was always

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Photos B Ranganathan

He puckers up his face, clenches his fists, kicks his feet, and —screams!

Discipline the BABY

BEULAH S. FRANCE

YOU look at your sleeping newborn—quiet, peaceful, angelic. "Discipline?" you ask. "What is discipline?" Your baby stirs. He wakes and cries. "Is he hungry? wet? soiled? Oh, he had a bubble! There, now he's all right."

He rests across your shoulder quietly. You lay him back in his crib. He puckers up his face, clenches his fists, kicks his feet, and—screams!

As time marches on you find he acts this way more and more often. Cries until picked up. Stops while being held. Screams when laid down again.

You're getting just a bit exasperated. Worry is slowly but surely giving way to annoyance, for the doctor has assured you the baby is in excellent health. "He just needs some discipline."

You ask again, this time not sceptically, "What is discipline?" The doctor looks thoughtful for a moment, then says, "Discipline is guidance. It is the day-by-day teaching of your child how to live most happily with others. It is just as essential for his emotional development as is food for his physical growth."

That all sounds fine. It certainly is true. Good common sense. But you need more concrete information than that, more than a busy doctor can possibly take time t[o] give you. So let's discuss disciplin[e] together here and now.

The doctor has told of its valu[e] Unless your child learns to tak[e] discipline, unless he learns earl[y] how to discipline himself, he wi[ll] never know how to live happi[ly] with others. Or with himself eithe[r].

Think of the people today wh[o] are victims of lack of ability [to] withstand temptation or endu[re] ridicule. They never acquired t[he] protection of discipline. They [are] not living happily with others. Th[ey] are not happy with themsel[ves] either.

Children are not born with a sense of values. This phase of [life] has to be learned. The most ra[pid] learning takes place during li[fe's] first five years. As a rule, the [par]ents are the teachers.

You must teach your child iscipline—discipline through love. an you give him too much love? ot too much love. But you can ive him too much attention. If you ive in to his every wish and whim, e will not learn discipline.

Can you give him too little love? ou surely can. Without deep devo-on sufficiently shown a child, he ill wilt and wither exactly as a ail flower does when robbed of nshine.

It is not at all easy to determine ow much affection to give. Some oungsters need more than others. arents should study their children, atch them, see how they respond. ven in large families no two are st alike.

You must also watch and study urself. Observe your own actions and reactions. Recognize and correct your faults. Check up on your ways with your child. Over-protection and too much security continued beyond the utterly helpless stage will create situations that call for discipline—again, discipline yourself as well as your child.

Unless you have your temper under control, how can you hope to teach your youngster to control his actions? And always remember it is actions, not feelings, that a young child has to hold in check. It would be utter folly to tell a boy or girl who isn't even five yet that he musn't feel cross, musn't want to pull pussy's tail, must not have a strong desire to strike you when you cross his purposes.

All such talk would go over his head. What he has to learn first is how to handle such feelings, how to resist the action he is tempted to take; in other words, how to master the art of self-control.

This he best learns if you set a good example. Mothers or *ayahs* who fly off the handle, slap, shake, or yell at their children set very bad examples, for children are imitators. The best way to teach discipline is to keep calm yourself. Conceal your feelings if you want your child to learn to conceal his feelings. Don't lose your temper when he loses his or when he refuses to obey.

Attempts at disobedience are a part of progress in a child. He tries to see how much he can get away with. You won't want him too docile. He needs courage to defend himself. He has to practise it in the home. It must not be put down without understanding. He must not be cowed.

The too-good child is genuine cause for concern. Either he is mentally deficient or is frightened into silence. Expect rebellion. Be prepared for impudence. Don't demand too much. It is too important that your child develop into an individual for you to insist upon pouring him into a mould.

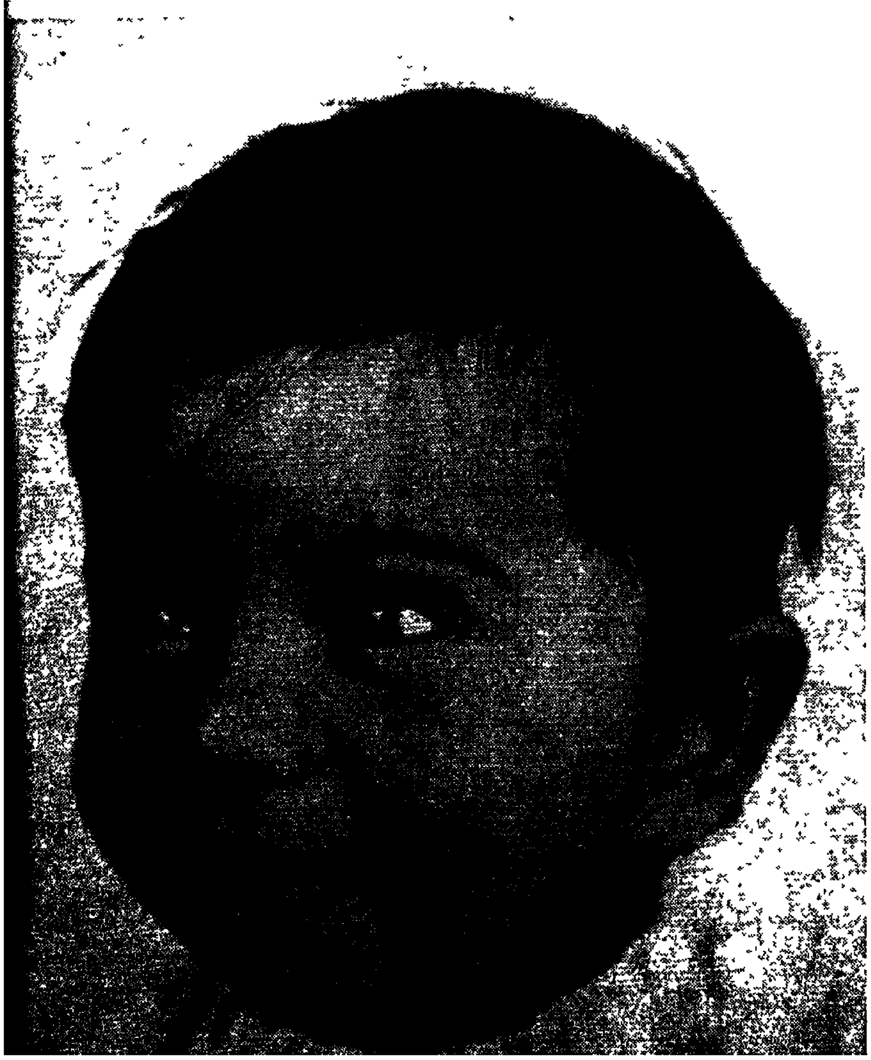
"What shall I do then?" you ask in bewilderment.

Well, begin at his birth to curb your desire to rush and pick him up every time he cries. Make certain he is not in discomfort, assuring him of affection by your tone of voice and smile; let him learn to be content to stay alone. That is the first step toward good discipline.

When he begins to get about on his hands and knees, avoid saying "don't" too often. Say "let's" instead. "Don't" should be a very precious word kept for special occasions. In that way it will come to have more meaning. Reserve it for emergencies. "Don't touch that hot pan, it will burn you!"

Try to see how few orders you can guide your child with. Then he

You must teach your child discipline—discipline through love.



will heed a quick order. You may someday save his life by the use of a "don't" if he isn't too familiar with the word.

From the very beginning of your motherhood do these two things:

1. Consider the necessity for reproof or correction before you speak.

2. Decide against reproof or correction unless it is for the happiness of you or someone else. Know why you deny him a privilege or freedom. Be sure your reason is good. Keep in mind that he too is a person.

It's of utmost importance that everyone who disciplines your small son or little daughter have identical standards for good behaviour. It's a poor policy to let a child learn that Father's No may mean Mother's Yes. Have a chat beforehand with anyone who is to grant requests and correct your child. You and your husband must decide on even the minor details of what is to be objected to or overlooked.

This done, there will be no arguments or contradictions. When you correct your boy or girl you know that your husband, your mother, or whoever is in your household will not interfere. If you are not certain what to do, discuss it with the others before you reach a decision. Two heads are often better than one.

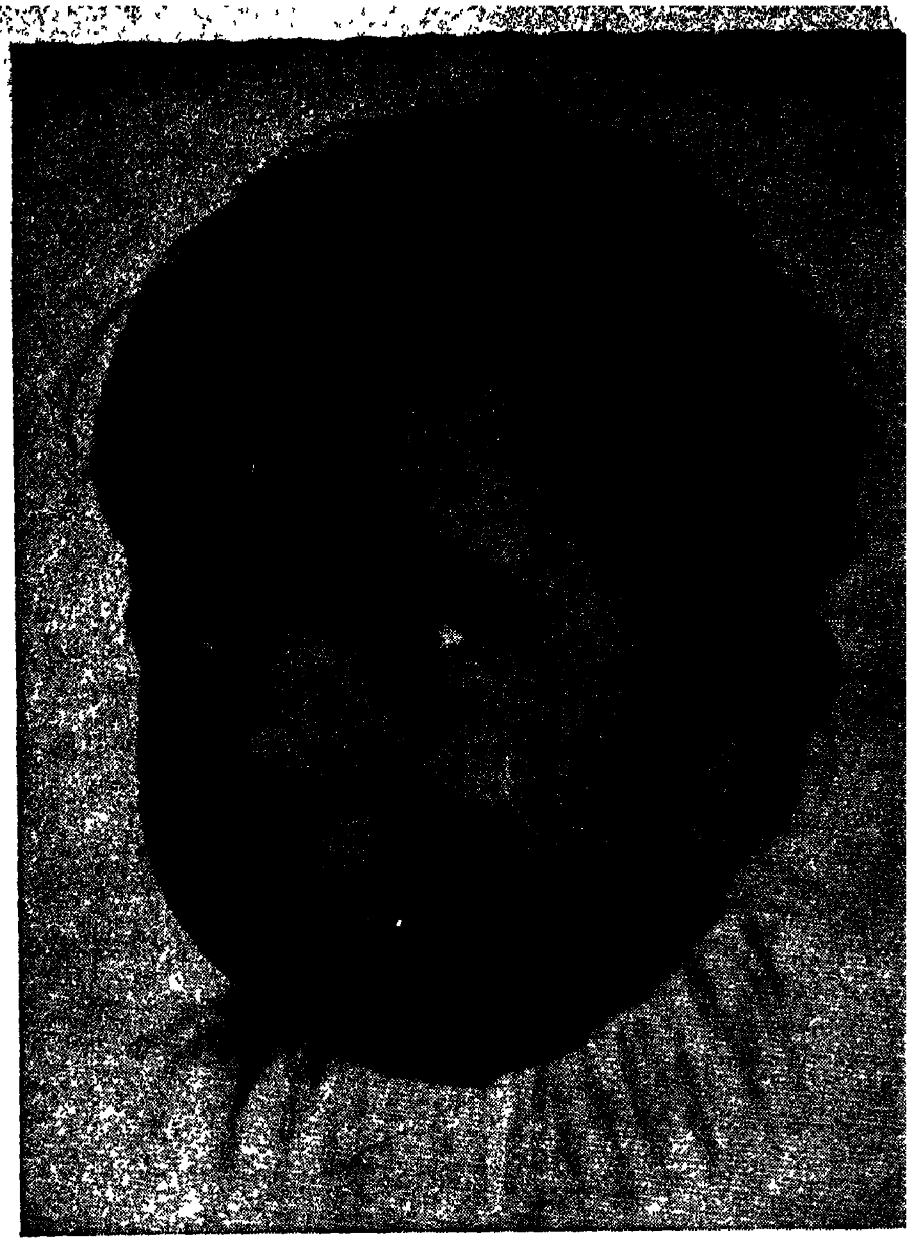


Photo. B. Ranganatha

Perhaps your child has some justifiable reason for his actions.

Perhaps your child has some justifiable reason for his actions. Study the situation carefully. Environment is often to blame for what we readily call naughtiness. Misunderstood emotions may be upsetting him. Resentment toward someone or something may be secretly harboured. He may not feel well. Check on his appetite. How are his bowels? Does he sleep soundly? Does he get plenty of exercise out of doors?

When you are positive that punishment is called for, be sure it fits the deed. Never punish severely for a trivial misdemeanour simply because you feel upset, nor ignore a real display of naughtiness because you happen to feel pleasant. Such actions are confusing to a child. Uniformity of discipline is essential.

What type of punishment is best? That depends on your child. A sharp reprimand is enough for some sensitive children. Others may need an occasional spanking. But spanking should occur so seldom that when it does it will leave an impression on the child who is not yet five.

If he can be reasoned with, a brief period of isolation may b best. Gently but firmly say, "Whe you act like this, it is better for u all if you stay by yourself until yo get over your crossness."

Never put a child to bed as form of punishment. In his min sleepy-time should always be a sociated with happiness. And neve put him in the bathroom. There too much danger of his drownin in the tub. Let him come out isolation as soon as he quiete down. Tell him to bring a smile o with him. Do not pick up the qua rel when he appears. Act as if not

g had happened. Don't make e mistake of apologizing, however.

Promising to pay a child if he is good is poor policy. Take for granted he will be good. The power of suggestion is tremendous. Avoid threats. It is cruel to tell a child you will not love him if he misbehaves. Love is his security in the world. Take that away and what does he have left? It is most unfair to say, "I'll tell your daddy how you acted." You may build up hatred. And it could be hatred of you!

Remember what the doctor said to the inquiring mother. "Discipline is guidance. It is the day-by-day teaching of your child how to live most happily with others."

Bear in mind always that day by day you are guiding your little boy or girl into the paths you honestly believe lead to the best that life has to offer.

DON'T BLAME OTHERS

(Continued from p. 17.)

riticizing other people, and no one ould ever do anything that really leased her. She concentrated on ll the real and fancied wrongs that thers did to her. This constant ervous strain made her ill, and ltimately she was sure she had lmost every disease known to edical science! But the most iseased part of this lady was her wn morbid imagination.

Such patients are extremely hard o treat. It is difficult for them to ccept any good sound medical dvice. They drift around from one octor to another, hoping that omeone can recommend a surgical peration or a special medicine that ill straighten out their troubles nce and for all. They demand that he doctor be perfectly honest with hem, telling them "the whole uth, and nothing but the truth." hen when he does, they are anoyed and chagrined, and rush off o the next doctor complaining bout the last one they have seen, escribing his "mistakes" in detail. nd so the process is repeated, year fter year. And what is even more stressing, their children are all too kely to develop the same unrtunate characteristics.

Such people are known as *eurotics.* They are suffering from eep-seated mental conflicts which ten arise from the earliest days of eir childhood. This is one of the tragic results of either too much training in childhood or else too little supervision in the earlier years. Some may wonder whether these tendencies are inherited. Probably not. But there is no question that they are developed very early in life, largely because of the stress and strain of an unhappy childhood environment. It is surprising how often these earlier conflicts affect our decisions in later life, after we may have completely forgotten all about the original problem. Most of the peculiar things we all do and say spring from those long-forgotten days of our past. The habits we formed in childhood, the prejudices we developed, the way we walk and talk, the way we think and act—all these and much more spring from our early environment. The foods we choose, the appetites we develop, the kind of friends we desire, and the way we live are greatly affected by the training we received as children. Our characters are moulded for good or ill by the experiences through which we pass during our childhood years.

As babies we are born neither good nor bad, although some of us may have a better chance of success than others. But it is most encouraging to think that a child with a very poor background may be trained to become a real success in life, if he is surrounded with the right kind of influence at home and at school. On the other hand, a child with the finest birthright in the world may make a complete failure of life, unless he is given the right kind of home training. Such training can come only from parents who have learned how to discipline them-

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BABY'S BATH IS IMPORTANT

Louise Price Bell

NEVER let anything interfere with baby's bath. It is vitally important that he be kept sweet and clean, that his clothing be carefully washed in mild soap-suds, thoroughly rinsed, and dried before they are put on. On chilly mornings, warm the tiny garments before slipping them on to his little body to avoid sudden chilling of his sensitive skin.

If you bathe "His Majesty" in the bathroom, keep it warm but not over-heated, or he may become chilled when you take him into another part of the house when bath-time is over. Perhaps you bathe him in one corner of a room, such as your bedroom. It is a good idea to set the bathinette against a screen to avoid possible drafts.

Never get to thinking that because this bath has to be given every day it is "just a matter of routine" and not important, for it is. You'll find that a happy, cooing baby is always the result of a nice bath, given calmly and with leisure by a fond mother who understands how important cleanliness is to the good health of her baby!

Your Disposal System

H. O. SWARTOUT, M.D.

Body wastes are cared for adequately by the body when the system is in health.

THE human body is sometimes called a machine. The body has moving and working parts, and can take in what may be called raw materials—largely in the form of food—and turn them into body-building and body-repairing substances or use them to produce heat and energy. As in the case of almost every machine that uses raw materials to turn out finished products, heat, or energy, the body produces waste materials in the process of carrying on these activities.

These wastes are of two general types. Some of them are composed of food fractions that the body cannot or does not digest. Wastes of this kind pass through the entire length of the digestive tract and never enter any other part of the body. Other wastes are composed of substances that have been used either to build or repair the body, and have later broken down or been chemically changed in the body tissues to produce heat, energy, or both.

The unused or unusable food fractions that pass through the digestive tract are more or less changed by bacterial action, chiefly in the large intestine. They become mixed with innumerable living or dead bacterial bodies and cast-off cells from the lining of the intestine. This mixed mass in the large intestine is called fæces. It passes slowly through the large intestine, collects in the lower section of it, and is expelled periodically from one time to three times a day. If there is but one evacuation a day, it most commonly occurs in the morning.

Evacuation of the large bowel is normally brought about by the contraction of muscles in the walls of the organ. There is an interesting relation between the various sections of the digestive tract, which act together to make a wave of contraction that starts in the upper part of the tract and travels slowly downward to lower parts. When food is taken into the stomach, a series of slow contraction waves is started to help digest the food there. Normally, these waves are followed by mild contractions in the small intestine and then in the large intestine.

This happens whenever food enters the stomach, and is the basis for arguments of some who say *there ought to be an evacuation of the bowel after each meal. If but one evacuation occurs in the day, it logically should come after the first meal of the day.* This meal comes at a time when a comparatively long period has elapsed since the previous meal, and there has been time for a comparatively large mass to collect in the lower part of the large bowel.

Neglect to evacuate this mass in the morning is a fairly common cause for constipation. Caring for it will go far toward curing constipation in many cases.

A desire to empty the large bowel may come at an inconvenient time. If this desire is repeatedly resisted and the bowel is not emptied, the tendency is for the desire to grow progressively weaker. On the other hand, purposely going to the toilet every day a few minutes after breakfast and trying to empty the bowel, even in the absence of a desire to do so, will often build up a regular habit at this time.

Wastes that come from digested food fractions are generally liquid or gaseous in nature. If not liquid or gas of themselves, they are soluble in water and are thus in a liquid form in the body. Being formed in the tissues as a rule, they must have some way to get out of them. Going into solution in the blood is the commonest first step in this direction. The most abundant waste of this kind is carbon dioxide, a gas formed when digested food is used in the body to generate heat and/or work energy. It is formed in smaller amounts when body tissues break down. Because carbon dioxide can easily dissolve in water, it is rarely found in the tissues or in the blood except in solution.

Digested food may contain more of certain soluble mineral substances than the body needs—common salt, for instance—and the excess counts as waste materi

(Continued on p. 28.)

Drop Your Shoulders

ORVILLE A. LINDQUIST

HERE have been many articles and books showing the effect of relaxation on alth. In all of them we are told at muscular tension is at the bot-m of many of our ills, and that ch tension is caused by our rious emotions. This is true, but seems strange to me that none of e writers advocate dropped oulders and loosely hanging rms. It seems to me that, if one ishes to relax, this is the most fective way to go about it.

All joints of the body except one re connected by ligaments and artilage. The exception is the houlder, where the muscles are astened directly to the scapula and lavicle (shoulder blade and collar one). About twelve of the largest ody and arm muscles are attached these two bones (they really are ne), allowing for several inches of houlder movement, up, down, orward, back, and in a circle.

The principal cause of shoulder ension must be laid to one of our rgest body muscles—*trapezius.* his is a diamond-shaped muscle astened to the base of the skull and xtending to the tip of each houlder and down to the twelfth ertebra. Any mental stress whatso-ver tenses the upper part of this eat muscle and causes a pull-up the shoulders. Naturally, any ulling up of the scapula and the avicle pulls on the muscles that e attached to them causing xtensive tension in the body and ms. The more pull-up, the more nsion. So it seems to me that to relaxed means, first of all, to ve the shoulder down.

In order to feel this tension try is exercise: Stand erect, drop the oulders, let the arms hang loosely the sides, and feel as relaxed as ssible generally. Make a full-arm ndmill swing with the right arm. you are relaxed—and you should if you started the swing with the oulders down—you will find the ng free from tension.

Try the same exercise again, but this time start the swing from a raised shoulder, keeping the shoulder up while swinging. You will find that the movements are tense. The higher you keep the shoulder, the more tension there will be. (Notice, golfers and ball players: If you cannot get a relaxed windmill arm swing because of pull-up of the shoulder, you cannot get a free golf or bat swing for the same reason. Relax the shoulder.)

What causes the trapezius to tighten? Invariably it is because of some emotion, usually fear, anger, or worry. It may be caused by many more emotions.

Fear. No doubt you have had the experience of being frightened by a snake. Did your shoulders shoot up? You can be sure that they did. A sudden clap of thunder will cause them to do the same These are cases of extreme fear, but any form of fear will cause tension in the shoulder muscles. The amount of shoulder-pull-up depends on the amount of fear.

Anger. Anger invariably pulls up the shoulders, very commonly in the animal world. The cat arches its back at the dog, and the hair between the dog's shoulders starts to bristle. Spanish bullfighters keep their eyes on the hump between the bull's shoulders, for they know that when it begins to rise the animal is becoming angry.

Anger works on man in the same way. A person can be so filled with fear and anger that he develops goose flesh, which means that the tiny muscles at the root of each hair has become tense.

Worry. Muscles have a stubborn habit of staying in the same condition they are usually kept in. The farmer bobs up and down when he walks, a habit formed from walking on loose earth. The cowboy is bowlegged from riding horseback. The sailor waddles like a duck, because that is the way he keeps his balance on a ship.

The man who constantly worries about his health, the weather, his finances and family troubles brings on himself a chronic trapezius muscle tension. Constant fear or anger has the same effect on bodily muscles.

Hate, jealousy, envy, anxiety, disgust, embarrassment, and lack of confidence do the same. The

(Continued on p. 28.)

STORY TIME

SLEEPY OLD CARLO—PART I

Keith Moxon

WINTER came with a rush that year. The thermometer had been dropping gradually for two or three days, and then the cloud-filled sky went leaden.

To Carlo, the old St. Bernard dog, it was the signal to move indoors. He stretched comfortably in the warmest parts of the living room, and dozed by the hour.

And Jeannie, one evening, being told to set the table for supper, didn't see him. She tripped on his sleeping form and almost spilled the milk.

"Mother," she snapped, "I wish we'd get rid of this lazy dog. He's a nuisance."

"Is that so?" said Mother. "I think he's very nice."

"He's always getting in the way," snarled Jeannie

"And if we're playing ball, he'll lie down and go to sleep right on top of a base, and he's so heavy, nobody can move him," put in little brother Peter.

"And when we try to grow a garden, he's always spoiling it," Jeannie went on. "Last summer he kept going to sleep on my tomato plants."

"But you children must remember," said Mother, "that when you were little he was always patient with you, giving you rides on his back, and never minding what you did to him."

"But that was years and years ago," said Peter.

"And Uncle Frank says we should shoot him and put him out of his misery. He's got rheumatism," said Jeannie.

"And he's half blind," added Peter.

"Well, children, maybe so," said Mother, with a sigh. "But we won't have Carlo much longer anyway, and I think you ought to be nice to him for all the good times he used to give you. You owe him a debt of gratitude."

"Debt of gratitude, poof!" muttered Jeannie. But since supper was ready by then, and Jeannie and Peter dearly loved anything connected with food, what to do with Carlo was dropped for the moment, in place of happier considerations.

After the first freezing weather a warm period followed, and snow fell, draping the leafless trees around the house in sparkling white.

A day or two after came the first heavy fall, great wads of snow falling thick and fast, and piling up a foot deep in the yard. To Jeannie and Peter it was now snowmen, snowballs, tobogganing, and skating. Skating!

"Let's go and see whether Wilson's Creek is frozen over yet," said Jeannie to Peter, after their thirtieth tobaggan ride down the hill near their home.

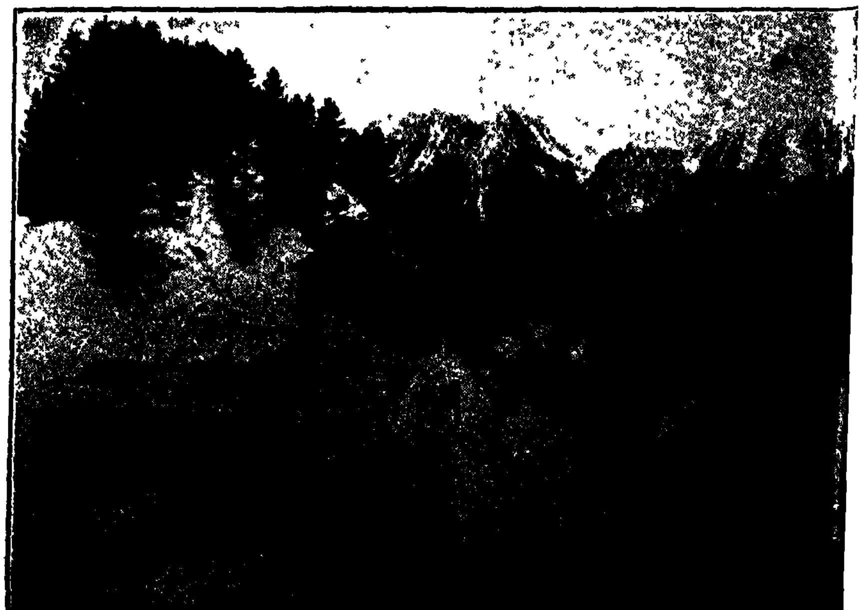
"Yes, let's," cried Peter, excited to think of new pleasures.

But as Jeannie gazed into her brother's expectant face, there echoed through her mind what her mother had said as they had left to go tobogganing "Don't go anywhere else. Come *straight* home."

Well, Wilson's Creek was *sort* of on the way home. Just a little longer way round, that was all. And then, *really*, she was a big girl now, almost a *lady*. Surely she could be trusted to take one *look* at Wilson's Creek. Yielding to her thoughts, she caught Peter's hand, and together they set off for the creek.

Struggling through snow after such a large helping of tobogganing took longer than Jeannie had expected. They had not reached their destination before a weary boy asked to rest. Oh well, Jeannie decided, maybe they should forget the creek, and go home.

As they turned to retrace their steps, for the first time the girl noticed that the sky was darkening. Before she was half way home it had changed to the characteristic



den hue that meant only one ng—snow!

To be caught on foot in a snow-rm in Canada is a thing dreaded. , a tingle of anxiety went ough Jeannie, and she urged er to walk faster.

But human nature could do only so much. Soon the small boy asked to rest again, and thereafter there were frequent rests.

Eyeing the ominous clouds above her, Jeannie urged her young brother as much as she could, but the little fellow soon got to the place where he could not walk another step. Snowflakes began to fall, and panic stricken, Jeannie caught Peter up pickaback and struggled on.

(Concluded next month.)

HOMEMAKERS' HELPS

HEALTH FROM NATURE

M. Ninaj Larson

ON THE whole, women do not spend enough time out of doors. The duties of caring for husband, children, and the home are so many that only too often the mother of the home finds that she spends the greatest part of her twenty-four hours within the confines of the walls of her home. Many of the complaints of headaches, chronic illnesses, "not feeling well"— perhaps the most common complaint, bruised spirits, quickness of temper, come from nothing more than the effects of living our lives without the benefits of the health-restoring and spirit-restoring out-of-doors.

If you would keep well, buoyant, and cheerful, let your eyes turn to the stimulating out-of-doors. Try to do as much of your work as possible out in the open air. You will be surprised how much of it can be done there. Why not shell beans, clean potatoes, mend the children's clothes, or write letters, out of doors?

Undoubtedly, the best way to live is to live out of the city. If circumstances or necessity compel us to work in the city, the home should be chosen as far away as possible from the bustle, noise, and dirt of the town A compound that is neat and that is adorned with trees, plants, and flowers, not only adds beauty and daily happiness to the family, but is a source of relaxation and health to the family. Only too often it is the mali who enjoys the pleasant rewards of a compound garden.

As I write these words I am sitting in my garden. I wish I could share with you the loveliness, peace, and restfulness of the joyous songs of the birds—they are everywhere, the butterflies flitting here and there, the quiet stillness. There are begonias and geraniums by the wide-spreading tree nearby; in front of the house are Michaelmas daisies, red roses against the wall, and coral bougainvillæa attempting to locate in the neem tree. A chipmunk is examining something by the red hibiscus bush. A little sparrow is hopping up and down the walk a few feet away. The sky is blue and still. The guava trees are filled with fruit. A minah flies over to one of the casuarina trees. It is peaceful; it is restful; it is delightful to the eye and to the ear.

One of the greatest benefits that come to us is that of the sunshine Without sunshine plants cannot live. Without sunshine we cannot live. There is a vibrant energy from the sun that permeates our whole system. Sunlight helps the circulation. Sunlight is responsible for the manufacture of Vitamin D by our skin so that the calcium and phosphorus from the food we eat is

RECIPES

Walnut Bars

One egg; ½ cup sugar; 1/3 cup melted butter; ½ cup flour; ¼ teaspoonful salt; 1 cup chopped walnuts; ½ cup raisins; 2 teaspoonfuls lemon juice.

Beat the egg and add the sugar gradually, beating constantly. Add the melted butter or other shortening. Mix these thoroughly. Sift flour and salt together. Add to the egg mixture. Add the walnuts, raisins, and lemon juice. Bake at 350 degrees F. When done cut into bars 1" by 4".

Crispette Squares

Quarter cup margarine; 1 cup flour; ¼ teaspoon nutmeg; 1 cup brown sugar, ¼ teaspoonful salt; 1 teaspoonful vanilla; ½ cup brown sugar; pinch of salt; 2 well-beaten eggs; 1 cup moist shredded coconut; 1 cup walnuts, chopped; 1 cup crisp rice cereal.

Cream shortening and ½ cup sugar. Add flour, salt, nutmeg—cutting into creamed-mixture as for pastry. Press into greased baking pan about 9 inches square, and bake in moderate oven, 350 degrees F., for 15 minutes

Beat eggs and remaining sugar until fluffy; add salt and vanilla Add coconut, rice cereal, nuts. Mix well and spread over first mixture Continue baking 25 minutes. Cut into 1½ inch squares and remove from pan while still warm.

Peanut Strips

Half cup butter; 1 cup brown sugar; 2 beaten eggs; 1 teaspoonful vanilla; 1 cup flour; pinch of salt, 2/3 cup shelled and roasted unsalted peanuts; ¼ cup light cream or rich milk.

Cream butter and sugar. Add eggs and vanilla. Beat well. Add cream, then flour sifted with salt Stir in peanuts. Bake in 9 x 12 inch pan in moderate oven, about 350 degrees F., for 30 minutes. Cut in strips and roll in icing sugar

packed away into those structures of our bodies that we call bones and teeth.

In the West it is customary to take sun-baths, but too frequently the sun-bathing custom is carried to so great an extreme there that the skin blisters and burns. In many sections of India the climate is so hot and the sun is so strong that people try to avoid staying out of doors in the sunshine. However, there are times of day when it is relatively comfortable and pleasant outside. Of these times we should take full advantage. If we are out when the sun is shining with great brilliancy, it is wise to protect our eyes and head.

We quote from Dr. Wayne MacFarland: "The warmth we feel when out in the sunlight is caused by invisible rays of energy coming from the sun. These rays are called infra-red, which means below the band of visible light that is red in colour. These rays of energy have the ability to penetrate a short distance into the skin. They cause the blood vessels to enlarge in the skin, and thus increase the circulation. They also cause the muscles to relax, and consequently there is probably an increased amount of blood circulating through them."

But there are other benefits of the out of doors besides the benefits of the sunshine. The lovely trees, the green leaves and grass, the flowers, the songs of the birds,—all these relax the mind and body and turn the thoughts from the mundane to the divine and eternal.

The whole system is benefited for being out in the open. The pure air fills the body with vigour and strength. The blood is vitalized. Thus the brain and all the internal organs profit from the improvement in circulation. Without perfect circulation there can be no perfect health.



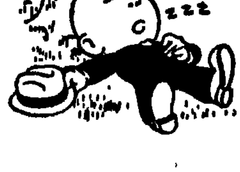
There is healing in the out of doors, for the air and the sunshine are God's ways of healing the body, the mind, the spirit. Not only does being out in the open heal our ills, but it also keeps us well and fit. The benefits are greatly multiplied when we engage in exercise in the open air. Muscles gain in tone, digestion improves, insomnia departs, we begin to feel full of life.

There is a decided and positive effect on the mind, an awakening comes to the intellect, the mind begins to feel more clear, the imagination is quickened.

As we see and experience the things of nature we are again assured that God who made these things and who cares for them, will also care for the beings whom He has created in His own image.

The out of doors gives us a deep desire to be pure and guileless. This is one of the reasons why we should try to keep our children in the fresh air and sunshine, and why we should encourage and train them to work with the soil. They will become not only healthy, but also sunny and cheerful. One great writer says that children should be as free as lambs to run about outside.

God gave us His precious gifts. What pleasure and blessing comes to us when we use these gifts aright!



HAND-BAG HINTS

HERE are some suggestions on the care of a handbag by Miss Fern Carl, extension clothing specialist, University of Illinois College of Agriculture:

"Handbags of dark leather may be cleaned with a mild saddle soap solution such as is used on shoes and luggage. Dry with a cloth and let stand at room temperature until thoroughly dry. The bag should never be immersed in water or placed ... near heat to dry.

"To protect the lining of your handbag, it is best to keep cosmetics in a special case, and if a pencil and pen are handbag necessities, keep the pencil capped and the pen top fastened securely. Brush the lining and pockets often to remove dust.

"About twice a month, apply a neutral cream sparingly to the leather and wipe off with a soft cloth. Bags with torn handles, rips in the leather, and broken locks should be taken immediately to a leather repair shop for reconditioning. Some shoeshops will repair leather purses and bags.

"Zippers frequently jam on purses. The right way to open a zipper is to press down gently on the tab with the forefinger, then pull back. Don't yank if the fastener stalls. Just back up gently, clear the way, and proceed as before.

"Over-stuffing your bag will spoil its shape and weaken the fastenings and seams; so carry only what you really need in your purse. At season's end when you want to put your handbag away, stuff crumpled tissue paper inside the bag to hold its shape, and store in its own box."

YOUR DISPOSAL SYSTEM

(Continued from p. 22.)

Tissue break-down may also result in some soluble mineral wastes. But this break-down results more characteristically in wastes containing nitrogen because it comes from the chemical decomposition of protein, a fundamental building stone in all living tissue. Similar wastes may result from taking an amount of protein food greater than the body needs for growth or repair. All these nitrogenous wastes are soluble in water, and are carried in solution in the blood.

Thus we see that as the blood circulates throughout the body it carries carbon dioxide, various mineral compounds that count as wastes, and various nitrogenous waste products. As the blood passes through the lungs, it travels in vessels with very thin walls. There is a thin, moist membrane with oxygen from the air on one side and carbon dioxide from the blood on the other side Under such circumstances an interchange of these two gases occurs. Thus in the lungs the blood builds up its stock of oxygen and gives off carbon dioxide, which is exhaled.

The blood also circulates through the kidneys, which contain certain peculiar structures with specialized cells that can remove from the blood any excess of water, also mineral and nitrogenous wastes. The mixture of water and these other wastes is called urine. It collects in the bladder and is expelled at intervals.

As the blood circulates through the skin it passes through tiny vessels in the walls of the sweat glands, which are especially adapted to select from the blood certain mineral wastes and some water. These wastes in water are discharged upon the skin surface as perspiration. Although the most important action of perspiration is to help regulate body temperature, it also accomplishes the removal of a moderate amount of waste.

To promote good health, pay attention to what will help these organs do their work and avoid overworking them. Here is your programme:

1. Try to maintain a regular bowel habit.

2. Do what you can to promote good circulation.

3. Remember the importance of plenty of fresh air.

4. Watch your water and food intake so that your kidneys will have plenty of fluid to help them do their work and will not be overwhelmed by an excess of protein waste.

5. Keep your skin clean and active by a suitable bathing programme.

DROP YOUR SHOULDERS

(Continued from p. 23.)

average man in his daily life is so filled with these various emotions that it is indeed rare to find one who is relaxed about the shoulders

Cold weather is a non-mental cause of shoulder pull-up. "Burr, it's cold," you say as you stand shivering, hands in you pockets and shoulders up to your ears. No wonder doctors often advise their patients to go south when they believe that their trouble is muscular tension. Heat relaxes muscles, but it is hard to keep them relaxed in cold weather. All athletes know this.

Is there a remedy? I am sure there is. If emotions tense muscles, it should be equally true that relaxing muscles tends to diminish emotions. Relaxation and mental strain cannot live together; the more you have of the one, the less you have of the other. Dr. Edmund Jacobson, of the University of Chicago, world authority on relaxation as it pertains to health, says that it is a physical impossibility to be fully relaxed and at the same time have mental excitement.

If a man in an angry mood will flop down in an easy chair, drop his shoulders, and let his arms hang loose, he will find his anger gone. If it does not entirely disappear it is a sure sign that he is not completely relaxed.

How shall you become relaxed? Because so many body and arm muscles are attached to the shoulders, the relaxing should start there. Relaxing should be the simplest thing in the world. Most people try to *make* themselves relax. Whereas they should simply *let* themselves relax. Because relaxing is simple, any exercise to achieve it should be equally simple

Here is one for practice. For freeing the shoulders from tension you need no other exercise.

Sit in a chair with hands lying loosely in your lap. Let the shoulders drop, and feel as relaxed as possible. Draw in a deep breath, and while inhaling gradually raise the shoulders as high as they will go. Notice the tension at this point Suddenly exhale, at the same time dropping the shoulders and flapping the elbows in and out a few times. As the elbows are flapped, notice the feeling of relaxation as compared with the tense feeling when the shoulders were high. You can not practise this exercise too much. After you get the feeling of relaxation practise with normal breathing.

Nowhere is it easier to have shoulder tension than when driving an automobile, especially in city traffic. Do not grip the wheel, but hold it loosely with the arms hanging relaxed. Always practise the exercise just given while waiting for the light to change.

The reason for the loose hold on the wheel is that relaxed muscles react more quickly to danger than tense ones. The only animals quick enough to catch birds are those that are relaxed, such as cats, snakes and weasels.

When sitting or standing, keep houlders down, with arms hanging loose. When walking, see to it hat there is always a good free arm wing. Mother nature will look after ou while you sleep.

I am sure that if you faithfully ollow and practise relaxing your houlders you will have less tension nd therefore better health.

DON'T BLAME OTHERS

(Continued from p. 21.)

elves. They can then give their hildren an example of obedience o the highest principles of life. The arent who throws temper tantums and who runs away from his esponsibilities can never train his hildren to meet the problems of fe successfully. His own example ndermines all that he may try to each. A vacillating disposition is a ery poor example for a child to ollow. People who "blow hot and old" and "fly all to pieces" whenver things don't go their way ave never really grown up—ther in mind or in personality. uch folks are always trying to pin blame for their troubles on to neone else. Their judgment is verted, and they cannot reach nsible decision.

Neurotic people of this type are be pitied, but not excused. idering to their constantly nging whims and fancies will er cure their diseases. Relatives have to live with such imure people need to realize that pathy is the worst medicine can give Such people have n badly spoiled in childhood, nothing will be gained by tinuing to spoil them. They ld be treated kindly, but with firmness, realizing that regardof their age, they have never ly grown up. That is why such ple often do better in a good pital, under the orderly care of -trained nurses. Their physical ailments are relieved and their emotional problems are greatly helped by the atmosphere of a well-disciplined medical institution.

Parents, let us face the facts. We can never expect our children to develop wholesome personalities unless we are prepared to set them the right example every hour of every day. The foundations of character are laid in the earliest years of life. Then let us *love* our children enough to train them well, so that they can meet the problems and emergencies of life without flinching and without running away from their responsibilities. A good, wholesome example is always the most effective form of teaching for any child. Such an example can come only from a parent whose life is well disciplined with the law of loving-kindness and tender mercy, for real love is the finest medicine and greatest force in all the world.

SALK VACCINE

Part II

(Continued from p. 15)

leased since May 26, 1955, have passed the safety tests. Since then, not one case of poliomyelitis has been caused by the vaccine among some 14,000,000 children who have received the shots. And, Dr. Scheele noted, there has been "substantially and significantly" less paralytic poliomyelitis among the seven- and eight-year-old children, the age group that received most of the vaccine, than in other years. The rate of paralytic poliomyelitis in 1955 was from two to well over five times greater in the unvaccinated children.

"We have passed the crossroads in the vaccination programme," Dr. Scheele concluded. Starting in January 1956 the manufacturers have turned out 8,000,000 to 10,000,000 shots of vaccine monthly. This means some 50,000,000 to 60,000,000 shots had been administered by April 1, 1956, well before the polio season began.

Meanwhile, research in new polio vaccines continues. "The present serums will be improved, less virulent forms of viruses will be found and substituted for the ones now in use," predicted Basil O'Connor, President of the National Foundation. "The Salk vaccine we have now will not be the last model."

Already in prospect is a vaccine treated with ultra-violet radiation instead of formaldehyde to render it safe. Reports from California researchers that the polio virus has been crystallized in pure chemical form is a significant step in the chemical attack that will one day

wipe out the crippling disease.

For even now, the polio fight is unfinished. It cost more than $22,400,000 in March of Dimes contributions and seventeen years of research to bring knowledge of poliomyelitis to the point where the present Salk vaccine could be prepared. More millions must be spent, more work done. During the same seventeen years, the largest share of March of Dimes funds—$203,600,000—was spent on polio patients' medical care during illness and on their rehabilitation. Today, the National Foundation is concentrating on patient care for the 68,000 "old" patients who wer born too soon to be helped by th Salk vaccine. Money will be neede for them and for future poliomyeliti victims. However, the scene is se Scientific research is hurrying th day when every parent in th world will be freed of the drea of poliomyelitis.

GARDENING FOR HEALTH

THE CARE OF CABBAGE

D. G. Cooper

THE most important of all cash crops grown for the Indian markets, is cabbage. lthough there is such a large de- and for this vegetable, one rarely ets an opportunity to purchase nything but the most inferior uality cabbages, which hardly reigh more than a pound or two.

In recent years, new and im- roved varieties of cabbages have een introduced in India from eeds imported from abroad. Not nly do these varieties weigh more —an average of twelve to fifteen ounds—but the leaves are also nore succulent, and possess a deli- ious flavour when cooked.

Perhaps one of the most im- ortant reasons why Indian grown abbages do not achieve size with aturity, is because they lack proper are. Although the culture of cab- ages is comparatively simple, it ssentially thrives in rich soil which as been heavily fertilized. Well otted farm-yard manure, should e incorporated with the soil to a epth of about four inches.

The seeds should be sown in ans or seed beds, preferably at he termination of the monsoons. Vhen the seedlings are about three four inches high, they should be ansplanted at the correct dis- nce, according to the variety that grown. The early varieties of bbage should be planted about fteen inches apart in the row, ith a gap of about two feet be- veen the rows. The late varieties, ing larger, require more space, d should be planted twenty- ur inches between plants and ee feet between rows. The crop matures in about four months. However, if maturity is to be has- tened, an application of Nitrate of Soda at the rate of one ounce per square yard, is found to be most helpful.

The common diseases of cab- bage is the Black Rot and Club Root. The former is a bacterial dis- ease, which blackens the veins of the leaves and causes the plants to rot. Seeds treated with corrosive sublimate, will put a check to this disease.

Club Root is a fungus disease, which attacks the root and causes it to swell. Affected plants are stunted, and usually wilt after a short period. Calomel Dust is found to be quite effective if mixed with the soil. Lime may also be used with advantage, and should be applied at the rate of fifteen pounds per hundred square feet

Sometimes cabbages are at- tacked by Aphis, causing leaf-curl Nicotine Dust is found to be most efficacious against these insects.

GARDEN CALENDAR FOR FEBRUARY

Plains

Vegetables:	Sow Mustard, Cress and Lettuce seeds. Manure Peas and Beans
Flowers and Ornamental Plants:	Liquid manure may be given to annuals which are already in bloom. Rose cuttings prepared earlier, may now be potted. Dormant Caladium and Gloriosa Superba tubers should be re- potted.
Fruits:	Mangoes and Litchi will now start to flower, and should be watered copiously. Sow Water Melon seeds.

Hills

Vegetables:	Sow under glass Beet, Beans, Lettuce, Tomato, Spinach, Turnips, etc.
Flowers:	Sow under glass Salvia, Nemesia, Schizanthus, etc.
Fruits:	Prune Apples, Pears, etc.

THE EDITOR SAYS

(Continued from p. 5.)

of it. But with the change of the seasons and the passing of time he came to regret his hasty decision and the furniture ultimately had to be discarded as worthless.

You say he was a foolish man. Yes, he was. He was foolish because of his short-sightedness. He was concerned with the immediate effects regardless of future consequences. How often we as individuals are concerned with the immediate effect of something that has to do with our life, with our character, with our reputation, with our dress, with our home, with our activities and we are so short-sighted that we fail to take into consideration the fact that there will be another day coming.

Perhaps the most common evidence of short-sightedness is in the use of our tongues. How often we speak hastily only to repent and regret at leisure. How often incautious statements are made, hasty words are spoken, and only the future can reveal the consequences. How true it is as the poet has said, that the boys who are flying kites can haul in their white-winged birds but you cannot do that when you are flying words.

Yes, there is a form of myopia, near-sightedness, short-sightedness, that the specialist in diseases of the eye cannot treat and cannot cure. The treatment, the cure for this short-sightedness lies within the individual himself. It requires a change of attitude. It requires the development of a more sound judgment. It requires the development of an appreciation of things that are of lasting value. It requires concentrated effort and the application of the power of the will to the present situation whether it is in the matter of thought control or control of appetites or desires. Whatever it is, the individual who would cure himself of short-sightedness must use his will consistently and earnestly. Only then will he be successful in the treatment of this condition, which, as I have said, is often more disastrous in its results than a physical condition in the eyes which can be treated, or corrected with the use of spectacles.

Yours for better vision,

L. J. L.

EPILEPSY

(Continued from p. 13.)

suffers loss of conscious relationship to surroundings. He may burst into incoherent speech and go through movements with his body that appear to be involuntary, yet there is no loss of consciousness. He attempts to resist any help proffered him, and strangely does not remember the incident.

Since it has been determined that 80 per cent of epileptic victims can be controlled so that they may live useful and productive lives, they are being freed from ostracism and are becoming successful in many fields.

If a patient becomes bored, he is likely to have more frequent attacks. Likewise if his associates show solicitude, he is likely to suffer attacks more frequently through over-restraint.

Anti-convulsant medicines are highly successful for most patients so that their co-workers after many years of intimate association are often astounded to learn that they are teamed up with persons susceptible to epilepsy.

Through modern medical research, more and more the old name, falling sickness, is becoming a misnomer.

A natural, pleasant attitude toward individuals suffering from epilepsy should be shown by their associates always. They neither want nor deserve a special kind of treatment nor a stiffness on the part of their companions.

Happy is the epileptic in whom the symptoms are entirely covered by medication. He can work away happily, concentrating on turning out a good day's work, even as you and I.

Not so well with the epileptic having greater problems, whose seizures may strike him more forcibly or often. Let us all make an effort to understand him, and proffer him our quiet acceptance daily.

DISABILITY DOES NOT MEAN UNEMPLOYMENT

(Continued from inside front cover.)

injured, or long-unemployed worker fit for work once more—and for vocational training. In addition, it actually provides what may be described as sheltered employment for the more severely injured.

In general, industrial rehabilitation as given in Government industrial rehabilitation units consists of courses conducted under the supervision of a team of experts. The team is led by a rehabilitation officer and includes a doctor, a vocational adviser, a social worker, and a disablement resettlement officer. The courses include graduated tasks in a number of industrial processes supplemented by physical exercises. The aim is to accustom injured workers to a full day's work by the end of the course, which averages eight weeks but may possibly extend to twelve weeks.

As well as preparing workers to resume full-time employment, the course enables those whose disability prevents them from returning to their earlier employment to have advice on changing their work. It may then be necessary for them to be re-trained at public expense.

There is little doubt that the fact that these injured workers do productive work in the busy and well-equipped workshops of the

(Continued on Back Cover.)

THE DOCTOR SAYS

1 This question and answer service is free only to regular subscribers

2. No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases.

3 All questions must be addressed to The Doctor Says Correspondence personally with the doctor is not available through this service.

4 Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES Answers cannot be expected under ONE MONTH.

5 Questions sent in on Post Cards will not receive attention

6 Make questions short and to the point Type them or write them very clearly

7 Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published Address "The Doctor Says," Oriental Watchman and Herald of Health, P O Box 35, Poona 1

PREMATURE GREY HAIR: Ques.—"I am twenty-one years old and have got quite a number of grey hairs. My general health is fairly good. Can you give me some advice or tell me about its remedy if there is any. Is Hennol any good?"

Ans.—There is no known injection, tablet, or treatment of any kind except dying the hair that will get rid of your grey hair. Some folks grey prematurely, but this does not mean they are becoming old.

?

AMŒBIC DYSENTERY: Ques.—I had amœbic dysentery in the beginning of this year. I had Emetine ½ gr.B.D. for eight days. The stools were negative for amœba after this. I have no pain in my abdomen, but my stools are very offensive. What can be the reason for it? Sometimes they are not well formed. Frequency is normal."

Ans.—The offensiveness of your stools cannot be fully determined without doing certain examinations of the stools. Probably the presence of a certain type of bacteria is responsible. By taking nothing but curd for a few days you might change the bacterial flora of the intestinal tract and thus alter the odour.

?

EYE INFECTION: Ques.—"A lot of dirt (white) collects in the medial corners of my eyes. Why is it so? My eye-sight is normal."

Ans—The material collecting in the corners of your eyes suggests the presence of a low grade infection. I would advise consulting a reputable physician, who could prescribe a harmless antiseptic which should eliminate this difficulty.

?

MIGRAINE: Ques.—"I have been a victim of 'migraine' headaches for the past twenty years or more but so far no one has succeeded in effecting a cure, even temporarily. The most that doctors have done is to abort an attack, or afford me temporary relief. Kindly give me your advice."

Ans.—"Migraine" is a very distressing type of headache the exact cause of which is unknown. We do believe, however, that the pain is due to the dilatation and contraction of the branches of the external carotid artery. Allergy, endocrine disfunction or œdema of the brain, seems to be a factor with some patients Emotional strain, fatigue, eye strain or the consumption of certain foods precipitate an attack in others This condition seems to run in families. It begins around puberty and diminishes after the age of fifty In your case, I would eliminate from my diet any food that seems to precipitate an attack. Gynergen, which you have been using is one of the most effective remedies It should be given as soon as you feel an attack coming on. At the same time you should go into a dark, quiet room and lie down. Sometimes inhalation of pure oxygen will relieve an attack. We also have found Nicotinic Acid (not the amide) to help in the early stage. It might also be of benefit to take an enema as soon as you feel an attack is approaching.

?

FOOD FOR HEALTH: Ques.—"Could you please tell me how to strengthen the eyes; how to strengthen the bones and teeth; and which foods do not mix?"

Ans.—I would not want to suggest therapy for the eyes without examining your eyes first. I would suggest that you consult a well-qualified eye doctor for this. The bones are strengthened by strong muscles combined with a diet high in calcium and other minerals and vitamins. Abstention from excessive sweets will be of benefit. Teeth suffer if a person does not get sufficient calcium, or if he eats excess of sweets.

There are few foods which do not mix. It is well, however, for some people to refrain from the use of fruit and vegetables at the same meal.

?

BALDNESS: Ques.—"Will 'Ronicol', a product of Roche Laboratories, cure baldness? If so how can I get 'Ronicol' in India?"

Ans.—Theoretically it is possible that Ronicol, a product of Roche and Company, may be of some help in relieving baldness as this product is a Vaso-Dilator, which increases the blood supply in the peripheral tissues. However, in practice, Vaso-Dilators in almost 100 per cent cases are ineffective in the treatment of baldness. We cannot recommend Ronicol for a sure cure of baldness. It may be secured from Volkart Brothers, importers, or almost any well-qualified pharmacist.

?

HERNIA: Ques.—"What is indirect hernia? What are the early symptoms of that disease? My friend who is twenty-one years of age has indirect hernia. What treatment do you recommend for him?

Ans—An indirect Inguinal Hernia herniates through the internal ring of the inguinal canal, while a direct Hernia comes through the external ring without having passed through the internal ring. The treatment for Hernia is surgery A truss may give temporary relief, but is very unsatisfactory from many angles.

?

LOW BLOOD-SUGAR LEVEL: Ques.—"I am 23 years old and feel dull and depressed between 9 and 11 in the morning. I am not constipated. Kindly advise treatment"

Ans.—I would suggest that you eat your largest meal when you get up in the morning and your lightest meal in the evening before going to bed. You are suffering apparently from too low a blood-sugar level as a result of not having enough food in the morning.

THE LAST WORD

New Method of Treating Diabetes Shows Promising Results

A NEW approach to the treatment of diabetes may usher in a new era for the millions of all ages who are afflicted with this disease. It has been developed at the Metabolic Clinic of the Dade County Hospital in Kendall, Florida.

In clinical trials on 14 diabetics, the preliminary report in a medical journal states, the new approach has led to a reduction of 30 to 80 per cent in the insulin requirements of about 71 per cent of the patients. It has also eliminated the need for insulin in more than 28 per cent of the patients, or four out of the 14.

The new method consists of a modified diet, high in protein and low in fat, which is supplemented with tablets that contain bile salts and four natural digestive enzymes derived from animal stomach and pancreas.

The four enzymes—natural catalysts which promote vital chemical reactions in the body—are pepsin, derived from the stomach, and *trypsin, amylase and lipase from the pancreas.* These enzymes and the bile salts help to digest the three basic constituents of the diet—proteins, fats and carbohydrates.

Since insulin is itself a protein, it is believed that an improvement in the patient's ability to digest proteins provides him with the essential building blocks for the production of insulin by his own pancreas. This would explain how the new diet-enzyme combination reduces, or even eliminates, the need for an outside source of insulin.

The tablets used in the new treatment are now being manufactured for further trials by the medical profession under the trade name of Entozyme by the A. H. Robbins Company, Inc., of Richmond, Virginia.

* * *

Health Facts from the Soviet Union

ALL expenses for the free health, educational and security services in the USSR are borne by the State without any contributions from the workers, according to a recent statement by the Soviet representative on the Social Commission of the United Nations. He added that there are today some 300,000 highly trained medical assistants; that some 3,000,000 workers (industrial) annually spent their vacations free of charge in rest homes and resorts; that provided they had worked for twenty-five years, all men at sixty and women at fifty-five received pensions for life; that in 1954 there were 4,000,000 students enrolled in universities and other institutions of higher learning and that in 1955 the Soviet Government had allotted more than 10 billion rubles, or 2 per cent of the national budget, to scientific research, not taking into account the training of scientists.—*WHO Health Front.*

* * *

TB and YOU

THE Tuberculosis Association Programme of the United Nations and UNICEF, as well as the Tuberculosis Control Programme of the World Health Organization have pointed out that·

1. TB can be an unnecessary disease
2. TB can be prevented
3. TB can be cured
4. TB can be eradicated by concentrated effort on the part of the whole community.

—*WHO Health Front.*

* * *

UN Health Aid to SE. Asia: 1957 Programme

THE South-East Asia Regional Committee of the World Health Organization has recommended a sum of $1,400,000 to be spent during 1957 in the region under WHO's regular budget. In addition, an outlay amounting to over $4,500,000 is envisaged for WHO-assisted projects in the region which would be financed (apart from sizeable investments by the governments themselves) out of funds expected to be available under the U. N. Technic Assistance programme and fro UNICEF.

The main countries to benefit, a members of the WHO Regional O ganization for South-East Asia, wi be Afghanistan, Burma, Ceylo India, Indonesia, Nepal, and Tha land.

WHO's plan of work in Sout East Asia for 1957, based on specifi requests from member government is designed primarily to strengthe further the various national healt services. Comprising more than 15 separate but largely inter-relate projects, the programme shows marked trend towards greater as sistance by WHO to the membe countries (in many cases with sub stantial amounts of supplies an equipment from UNICEF) in th training of personnel and in othe basic fields such as health educatio of the public and environment sanitation.—*WHO Health Front.*

* * *

Leprosy and YOU

ONE of the major difficulties i establishing leprosy control is to era dicate the age-old fear and prejudice traditionally inspired by this disease The leprosy control project in Kho Kaen Province of Thailand, as sisted by WHO, has launched a driv for health education of the public o leprosy. Apart from using establishe media of communication such a newspapers, radio, etc., the projec has printed 10,000 leaflets in the Tha language, in red and green contain ing short slogans to persuade th public to take a rational attitude to ward leprosy. The slogans include

1. Leprosy is curable.
2. Leprosy is preventable.
3. Leprosy is an ordinary diseas like any other disease.
4. Our aim is to eradicate lepros from Khon Kaen Province.

—*WHO Health Front*

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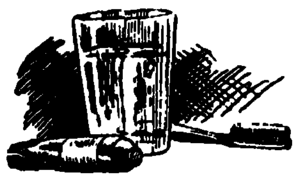
Your Mouth Health

FLORENCE M. CLARKE

A GOOD non-abrasive paste or powder is a valuable aid in cleansing the teeth. Its hief virtue lies in the physical tion of the tooth-brush on the eth in brushing away food par-les and acid film

Brushing helps keep teeth free om the deposition of tartar, the ain cause of pyorrhœa Through riodical scaling of the teeth by dentist or a dental hygienist, to-ther with the patient's own care o or three times daily, should ep your teeth free of tartar

Bacteria require warmth, mois-re, and darkness for breeding, l three of which the mouth furnishes. Although there is an army of disease-producing germs active in the mouth, there is also, however, another army equally active



in combating their work In the saliva are powerful agents for counteracting the effect of harmful bacteria.

Children should be taught proper mouth care at an early age. It is a good plan to accustom young children to allow the dentist to look at their teeth when they accompany their parents to the dentist's office, thus allaying much of the fright so common at the first visit. Children's baby teeth should be observed closely and any small cavities filled, so that the second teeth may be healthy and grow in good position. Never deceive a child by telling him that it will not hurt, for he will have to stand a little discomfort, and even pain at times, and it is well for him to understand this

Diet is important in its effect upon the teeth and gums Vegetables and fruits should have a prominent place Avoid over-refined foods as they are likely to cling to the teeth and form corroding acids This is particularly true of sweets and candies

When anything unusual is noticed in the mouth, let your dentist see it without delay An early diagnosis of any suspicious sore or swelling is most important, and should be made by a competent dentist or oral surgeon Some people disregard the presence of any small ulcer or swelling, preferring to dismiss it from their minds, until pain oftentimes reminds them of it, sometimes too late for remedy

A well-balanced diet, careful brushing of the teeth, periodic check-ups, and attention to any unusual sore in the mouth are good mouth health rules to remember



DISABILITY DOES NOT MEAN UNEMPLOYMENT

(Continued from p. 32)

units has [illegible] effect on them. The workshops are made the control of skilled craftsmen experienced in dealing with the blind persons.

[illegible]

[illegible]

For the [illegible] turn to the [illegible] some [illegible] [illegible] rehabilitation schemes [illegible] private companies [illegible] motor-car manufacturing concern of Vauxhall Motors Ltd which has a large factory north of London.

Special Factories

But perhaps the most outstanding contribution to solving the employment problem of the more severely injured [illegible]

[illegible]

opportunities, and they had, of course, to be manned by those whose output must, of necessity, be less than that of the uninjured worker. It is natural, therefore, that they have operated at a loss, and a considerable one.

On the other hand, the factories produce a wide range of [illegible] and trading losses must be offset against the fairly large allowances which the State would [illegible] pay to these disabled [illegible] [illegible] unemployed. And the [illegible]



BIS

An Arm Inspector at Roehampton Limb-fitting Centre, demonstrating a Draughtsman's Appliance

The Oriental Watchman and

Herald of Health

A Magazine for Home and Happiness



[M]arch
[1]957

Educating Deaf Children

How Britain Is Overcoming the Problem

JEAN N. HOWARTH

Department of Education of the Deaf, University of Manchester

THE presence of severe deafness at birth, or occurring in early childhood, is not only a serious social handicap but a major educational problem, because it prevents normal communication from developing. It is the experience of hearing the voice of his mother and of other people which transforms the normal child's instinctive cries into conventional speech.

The child who is born deaf is automatically cut off from this natural and vital experience, and after a short period in which he too, instinctively practises sounds he appears to become silent. This is a serious obstacle to intellectual development which ordinary teaching methods cannot overcome. In the past it was thought that because a deaf child's task in learning to use his native language is a difficult one, it should be postponed. Behind this view are some misconceptions about the learning processes of young children.

Investigations of the astounding linguistic and intellectual progress made in infancy by normal children have suggested that there are optimal periods for learning during which practice brings richest rewards for effort. In learning to talk, the most important period is the first five years, and it is now thought advisable that deaf children, too, should utilize their natural aptitude for speech at this stage.



Photo B I S

When a child is totally deaf, he can be taught to speak through lip-reading. As two-and-a-half-year-old Raymond Eccles holds up his toy bus, he watches his mother say the word "bus" and imitates her. Mrs. Eccles, with the help of research workers at a clinic at Manchester, has already taught her son to understand and use a large number of words.

GUIDANCE CLINICS

Dr. Irene R. Ewing, formerly director of the Department of

(Continued on p. 25.)

The Oriental Watchman and

Herald of Health

A Magazine for Home and Happiness

48th YEAR OF PUBLICATION

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DUNBAR SMITH, M.D., D.N.B., D.T.M. & H. (LOND.) ASSOCIATE EDITOR

J. B OLIVER, M.D., D.T.M ASSOCIATE EDITOR

OUR COVER

The waterfall at Courtallam

S G. Jayapalan

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Minute Meditations

GIVING IS LIVING

D. A. Delafield

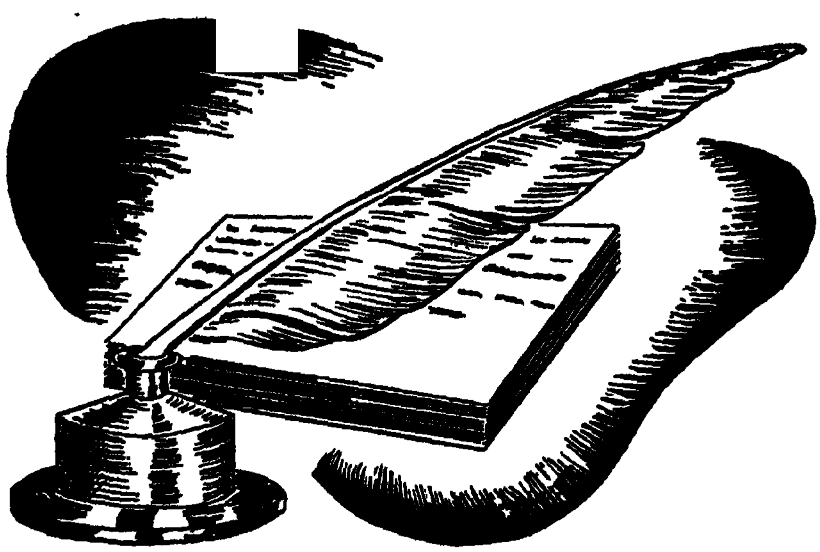
IF YOU have felt that healthy glow of satisfaction that comes from doing a good turn to a neighbour, you have discovered a principle that is the law of life for the universe. We have not begun to live until we know how to give of our time and possessions to others. Giving is living, and there are no two ways about it. He who gives has begun to live.

Most of us are going at this thing the wrong way. We are attempting to make ourselves the object of life and we learn to our sorrow, sooner or later, that self-ministry means constant misery. God made man as He made other living creatures, to minister to the whole, to serve as part and parcel of a great plan to serve. If we doubt that this is true, let us reflect a bit. Remember the time you were out of sorts and mad at yourself? The pleasures you had chosen just didn't satisfy. Then you got a headache, and perhaps a heartache out of it too.

If you will observe the most selfless men and women you know, you will find peace and contentment written all over their faces. They are happy because they serve. Others, not self, is the object of their lives. And the atmosphere of peace about them is but Heaven's endorsement of their lives of service.

Altogether too many of us spend our time and waste our lives wondering what we are here for and what life is all about. There is no settled purpose, no life plan to guide the soul through the sea of circumstances to port and safe anchor. We must face the bare fact that if we haven't learned to live we are merely existing. It is one or the other. Why

(Continued on p. 5.)



THE EDITOR SAYS

THE other day we received a note from one of our readers in North India, in which he said that he likes the magazine as a whole but he felt that we were over-doing it a bit on smoking, as our emphasis on tobacco and its effects seem to him to be a bit excessive.

We appreciate very much the frankness and sincerity of the statements that he made and also his suggestions. We have appreciated not only his comments but those of a number of others who have taken the trouble to write to us in recent months with their suggestions for the improvement of our publication.

Now, we recognize that some people do not see things in quite the same light that we see them. Somtimes our view on things is due to our background. Sometimes it is due to a closed-mind attitude that some of us maintain. Frequently, however, we find that prejudiced attitudes exist because of lack of information on a given subject. We usually find that when people become better informed on a subject they have a tendency to modify their opinions greatly. We are not planning to run an article on tobacco and its effects in the magazine this month but we are going to take the time, right now to reply to this suggestion of our friend inasmuch as the implication seems to be that we are wasting a lot of ink and paper on something that is unimportant, and which does not concern the reading public.



In the *Times of India* of January 13, 1957, appeared a small note two paragraphs in length. We are going to quote here the first paragraph: "*SURAT: January* 12. Surat and its adjoining areas were spending Rs. 3,50,000 a year on smoking, which could easily be avoided, said Mr. Harilal Bhat, Collector of Surat, addressing a meeting here last evening in connection with the Small Savings Campaign."

Now we do not know what our readers will think but it would seem, in our humble opinion, that when a district such as the Surat District is spending as much as Rs. 3,50,000 in a year on smoking, that even from the economic point of view the matter of the use of tobacco is something that is of vital concern to the people of India.

It would seem to us from our point of view that there is a great deal of money that is going up in smoke that could very profitably be diverted into some much more productive and useful channel than that into which it is going at the present time.

There is a great deal of discus sion these days about cutting dow on expenditures for unnecessar things. There is a great deal of di cussion about how we can sav throughout the country and wh can be done in order to hel implement the Second Five-Ye Plan. We note that in the marke in recent weeks there has been a unusual spurt in costs of many the commodities that people u The merchants all say that it due to the import policy of t Government, which as we recognize is a step which has be taken by Government in endeavour to make the rupee g little farther. In any case it see that it is making the rupee g little faster! In view of the fact t





even in one district, such as Surat, the people spend three and a half lakhs of rupees a year on smoking, which is known, medically, to be harmful, it is an amazing thing to the minds of some that nothing is done whatsoever about controlling or limiting, at least, the use of tobacco and its derivatives.

We have noted too, as we have travelled from one end of India to another, that there are large areas of very fertile land that are given over to the cultivation of tobacco instead of the production of food crops. This, to our way of thinking, is also a waste of very valuable land and a cause for some of the difficulty experienced in connection with food production in the country .

As Mr. Bhat, the Collector of Surat, has so wisely said, the 3,50,000 rupees which the people of that district spend on smoking during the year could very easily have been saved and that expense could have been avoided. Think what the people of Surat could have done with 3,50,000 rupees! Think what each family could have done with the small amounts spent from day to day on *beedies* or cigarettes or tobacco in some other form that was used in smoking! Not very much in any one day, it is true, but the total has accumulated to quite a sum. We believe if statistics were available, the sum spent for the nation as a whole for cigarettes and tobacco for smoking purposes alone in the past year would be staggering in its implications.

As our reader has suggested that we are unduly emphasizing the harmfulness of tobacco smoking and the use of tobacco, we are only able to reply that we are doing it because we recognize the danger inherent in the use of tobacco. We know that the use of tobacco as it is chewed tends to the production of cancer of the mouth, of the tongue, of the throat, and of the lips. We know that the use of the pipe very frequently seems to lead to cancer of the lips. The use of cigarettes has been shown to have a very definite relationship to cancer of the lungs. Therefore we feel that as a responsible health journal, we would be neglecting our duty to the public if we did not raise our voice in a cry of alarm and warning.

Looking at the use of tobacco



from a health point of view, nothing can be said in its favour. It is habit forming. It is filthy. It is an obnoxious habit. It is annoying to many who do not smoke or do not make use of tobacco and it is known definitely to be productive of diseased conditions.

Looking at tobacco and its cultivation from the view-point of the general economy of the country, it is recognized that although tobacco is a valuable cash crop for

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Giving Is Living

(Continued from p. 3.)

wait until it is too late to find our place in life? Why be like the man who found his work the day before he died? Life is short like that. We must begin to live now, and don't forget: giving is living.

All about us we see the happy results of unselfish living. "There is nothing, save the selfish heart of man, that lives unto itself. No bird that cleaves the air, no animal that moves upon the ground, but ministers to some other life. There is no leaf of the forest, or lowly blade of grass, but has its ministry. Every tree and shrub and leaf pours forth that element of life, without which neither man or animal could live; and man and animal, in turn, minister to the life of tree and shrub and leaf."—Mrs. E. G. White, "The Desire of Ages," pp. 20, 21.

Nature herself is unselfish and obeys the laws of God. She gives, and lives by giving. Let the biologist explain one of the vital functions of physical life. "The oxygen cycle, which occurs in connection with the manufacture of food by the green plant, consists of the taking in by the plant of the gas, carbon dioxide, which animals exhale, and the giving off of oxygen. Thus, ever since creation the green plant has been pouring out into the air the all-important oxygen which the animal must have in its cellular respiration. In the animal the oxygen unites with food materials to release energy for the use of animal tissues. Carbon dioxide is one of the end products that is

(Continued on p. 32.)

THE STUDENTS' GUIDE

WRITE, WRITE AND WRITE

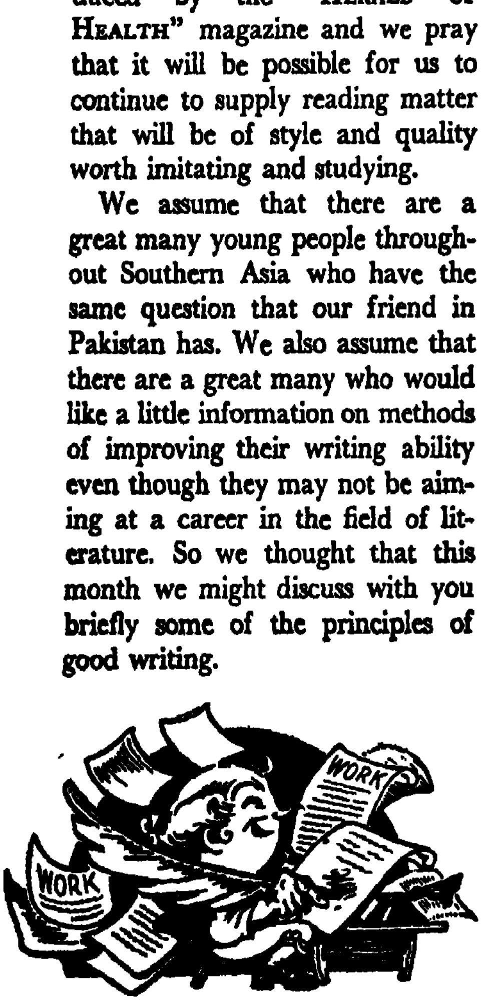
L. J. Larson

A FEW days ago we received a letter from a young man in West Pakistan, who is very anxious to know how he can improve his ability as an essay writer.

He states that he very carefully reads all of our editorials each month and likes the style and is endeavouring to develop a style similar to ours. Thus he flatters us!

We appreciate the confidence that this young man has expressed in the quality of literature that is produced by the "HERALD OF HEALTH" magazine and we pray that it will be possible for us to continue to supply reading matter that will be of style and quality worth imitating and studying.

We assume that there are a great many young people throughout Southern Asia who have the same question that our friend in Pakistan has. We also assume that there are a great many who would like a little information on methods of improving their writing ability even though they may not be aiming at a career in the field of literature. So we thought that this month we might discuss with you briefly some of the principles of good writing.



We recognize that some people have greater facility in expressing their ideas than do others. We also recognize that while a person may be fluent in the use of English, for example, he may not be nearly so fluent in the use of some other language. While we have studied a bit of one of the languages of India, we would certainly not set ourselves up as a model to be followed in writing in that language, nor do we feel that we would be justified even in submitting manuscripts in that language for possible publication, unless it were simply to demonstrate that one who does not know a certain language as his mother tongue can make some progress in learning how to use that other language.

The ablest writer is a gardener first, and then a cook. His tasks are, carefully to select and cultivate his strongest and most nutritive thoughts, and, when they are ripe, to dress them wholesomely, and so that they may have a relish.—J. C. and A. W. Hare.

We recognize that in all secondary and collegiate institutions in Southern Asia today, the majority of the students are required to take a number of languages in their regular course of study, so the national language as well as English or some other European language is usually required of them. This of course is a difficulty and a handicap but at the same time it will prove to be an eternal blessing to them if they really master their own tongue and at least one other.

ference which language a person desires to become proficient in, the same principles would apply, and so whether one desires to write in English, in Hindi, in Tamil, in Urdu, in Burmese, or in Sinhalese, or Khasi, we would suggest that the same general principles are fundamental and could be followed with profit.

In the first place, one who de-



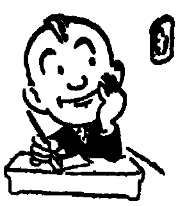
sires to write well in any langua should study the works of the re ognized masters in that languag If we would learn to write En lish well, we should study the con positions of the classical autho in the English language, not on of the past but also of the preser because in every language there a process of evolution, and expre sions that were in vogue in th time of Queen Victoria are no looked upon as archaic, and tern that were used by Shakespeare a out of date in the 20th century. new vocabulary has developed an a new mode of expression h arisen. Those who would write the English language in 1950 1960 would do well to study th current writings of recognized ma ters in the field of English liter ture. One way that this can b done, of course, is to read goo quality magazines that are pul lished in England and Americ

Let our literary compositions be la aside for some time, that we may aft a reasonable period return to the perusal, and find them, as it were, together new to us.—Quintilian.

Style has no fixed laws; it is changed ›y the usage of the people, never the ›ame for any length of time.—Seneca.

'rom month to month. Particularly would this be so of the more liter- ary type of magazine rather than he typical novel or short story nagazine. The smooth paper pub- ications are generally of a better iterary quality than are those of the rough pulp type. Also, the higher the literary quality, usually the higher the price of the maga- zine. These are just a couple of rough indications of what type of literature one might find in the publication.

After having read a good deal and studied a good deal to see how these different authors use the lan- guage, how they combine words, how they express ideas, the relative importance that they give to the use of adjectives and adverbs, how the verbs are used and the con- ciseness of construction as well as the choice of precise words, then the student would be well advised to try reading through some par- ticular essay in which he is par- ticularly interested. He should read it through a number of times and then after having laid it aside for twenty-four hours he might try to reproduce it in his own words. Having reproduced it he should go through his own manuscript l polish it to the peak of his lity at that time. Having done › he should take the original es- and compare it with the work t he has done. In this way he l be able to learn a good deal ›ut his own writing ability and ›ut the qualities he needs to develop particularly in his own work.



Those who are acquainted with the autobiography of Benjamin Franklin will recall that he, who is recognized as one of the mas- ters of the English language at that time, had done most of his work in his youth, in just that way. He had found things that he liked and studied them through. Then after laying them aside for a time he took up his own pen and wrote out the same subject. Then by comparing his work with the origi- nal he was able to make improve- ments. This type of work, of course, can be done without a teacher, but teachers are some- times helpful also in offering sug- gestions and in giving critical counsel.

Words are the dress of thoughts; which should no more be presented in rags, tatters, and dirt, than your per- son should.—Lord Chesterfield.

Of course, anyone who would aspire to success in the use of any language in the field of essay or story writing must recognize that he cannot develop a decent style nor can he express his thoughts fluently, nor clearly until he has mastered the use of the language grammatically. A study of the grammar of the language in which one desires to write is an absolute essential.

Too much polishing weakens rather than improves a work.—Pliny the Younger.

We find that many of the manu- scripts submitted to us here at the Oriental Watchman Publishing House are quite good so far as the ideas that are expressed in them are concerned, but they are clothed in such language that it is impos- sible for us to make use of them, because the time that we would have to spend in re-writing and re-constructing the sentences would make the cost of the articles pro- hibitive for us to utilize. So, mas- ter the grammar of the language and study construction in modern current literature and practise writing.



A very dear friend of ours under whom we had the privilege of studying writing insisted that the only way that a person can ever succeed as a writer is for him to write. It is necessary to write and write and write! Most of what one writes, of course, lands in the waste paper basket, but at least the very fact that a person is putting his ideas on paper, is helping him to become more agile in his thinking and in his techniques of expression.

It is sometimes helpful to take one paragraph of a composition that you have written and study that one paragraph through in an endeavour to make it more com- pact, more concise and more cor- rect in making it say exactly what you want it to say. Just taking that one paragraph and re-writing it a number of times is a very good exercise. It is also helpful to take one thought and endeavour to ex- press that thought in as many dif- ferent ways as one possibly can.

While these suggestions are not complete by any means, we feel that if a person is interested in this sort of work he will find that if he will follow these suggestions, the result will be of benefit to him in the development of a style of writ- ing and in the ability of expression.

The study of words is the first dis- temper of learning.—Ben Johnson.

TREAT TONSILS NOW!

CLIFFORD R. ANDERSON, M.D.

(Your Radio Doctor)

LITTLE Johnny Harris had been sick for a week. He came home from school com- plaining of a sore throat and a slight head cold. *No one took his* illness seriously. The family thought it was "just another cold." True, he had not been eating well, and he did look a little pale. He could not swallow solid foods, and he was unusually nervous and jumpy. Sore throats were not new to Johnny, and he had recovered from plenty of them. There was no reason to suspect that he had anything of a serious nature now, his family decided.

Everyone expected that Johnny would start eating again in a day or two, and would soon make up for lost time. But he did not get better. He looked hot and feverish when Dad came home from work. Still nothing was done about it. Everyone was hoping for the best.

About midnight poor little Johnny awakened the whole household with his moaning. He tried to be brave, but he was in agony. He suffered from severe pain in his left ear, and none of the usual home remedies were able to pacify him. He rolled from side to side, trying to find relief, but every turn only increased the pain. The glands of his neck were swollen and tender, his pulse was racing, and he had a high fever.

Johnny's parents were frightened. Somehow they had not even thought of calling the family doctor before, but now they needed him in a hurry, at two o'clock in the morning. (Why is it that so many people wait until after midnight before calling the doctor? Most medical emergencies could be avoided by a little consideration and planning beforehand, and there would be far less pain and perhaps less danger to the patient. Many a good doctor is worn out from lack of rest simply because he is continually disturbed by night calls that could easily be avoided. Wherever possible, call the doctor during the day.)

Poor little Johnny! He was a very sick lad when the doctor arrived. He had a high fever and a racing pulse. He was weak and listless, and moaning with pain. A quick examination by the doctor revealed that his left eardrum was bulging and ready to burst. This was the cause of his acute pain. His tonsils were inflamed and swollen, and the inside of his mouth was red and sore. It was difficult for him to swallow anything, even water, The glands in his neck were large and very tender. His heart was beating rapidly, and there was a loud murmur in his heart that suggested serious trouble with one of the valves.

Sizing up the situation quickly, the doctor decided that the hospital was the place for Johnny. The family called the ambulance at once. Soon Johnny found himself surrounded by nurses and attendants. His ear was drained under local anæsthetic, and soon the pain began to subside. He was given medicines to control the infection, and received the best care and attention.

Every day the doctor came to visit him and gave instructions for his treatment. He was worried about Johnny's heart, it was making such a slow recovery. The severe infection had also damaged Johnny's kidneys. After the acute infection subsided, the doctor took out his tonsils to help him make a better recovery.

Slowly the weeks went by. Johnny was still not back at school. He had gained some weight, but he was weak and had to spend most of the day in bed. The doctor came frequently, and each time listened carefully to his heart. He was worried because the main valve of Johnny's heart was badly damaged by his illness.

Occasionally Johnny felt pain in the joints and muscles of his arms and legs. This also troubled the doctor, although Johnny's mother thought they were just "growing pains." But the doctor knew that Johnny had rheumatic fever from those chronic sore throats, and now his heart was damaged, and he would never be quite the same again.

After several months Johnny did go back to school, but not to the strenuous activities he had once enjoyed. Now his activities were strictly regulated by the doctor. He must take care of himself and conserve his strength. He had to

e the doctor frequently, especially he had the slightest cold or even e suspicion of a sore throat.

The muscles of Johnny's heart were seemingly strong and in excellent condition, but there was onstant trouble with that main alve. It no longer opened and losed properly. It partially blocked e stream of blood that flowed rough the heart from the lungs. t failed to close completely at the roper time, and as a result part f the blood was sent in the wrong lirection. All this irregularity made he work of the heart much more lifficult. To compensate for the xtra work, the heart muscle grew hick and strong. But this did not olve the problem, for the main alve still failed to function properly, instead of being thin and lexible, that valve was thick and igid. Johnny was an invalid because the streptococcus germs that once lived in his tonsils and denoids managed to establish hemselves in the mitral valve of is heart.

Years later a famous heart urgeon performed an operation on Johnny's heart and freed the damaged valve. This made life easier for Johnny but how much more sensible it would have been to take care of those tonsils before the trouble started!

There is no such thing as a simple sore throat. Every sore throat should be treated seriously, for it can lead to trouble. A chronic sore throat will weaken the entire body and make it a prey to other diseases, such as scarlet fever, diphtheria, and tuberculosis. Chronic sore throats lead to sinus infection and serious diseases such as mastoiditis and middle-ear infection. Many a person has lost his hearing in one or both ears as a result of chronic sore throat and tonsillitis. There are hundreds of thousands of deaf people in the world who would be able to hear today if only they had been given the proper care when they were children.

Chronic sore throats are sometimes responsible for serious injury to the brain. The germs that cause meningitis often find entrance to the body through a chronically diseased throat.

Sore throats may also help to produce arthritis. The joints become swollen and inflamed because of poisons produced by the bacteria in the throat. These poisons bring on other diseases in the body, such as allergies and skin conditions, which may be hard to cure. Either these poisons or the bacteria themselves are responsible for nephritis, the most serious kidney disease. Because of the changes in the tiny kidney tubules, the body chemistry is thrown out of balance. Kidney disease is always dangerous for it may lead to high blood pressure, but the greatest damage of all is done to the heart.

Do not neglect a sore throat. It may be dangerous. You may be a menace not only to yourself but also to others. Epidemics of streptococcus infection sweep through crowded areas frequently. The germs are spread by coughing, neezing, and spitting. Many people do not feel any severe symptoms themselves but they may carry the germs to others. Fathers may pick up these germs at work and bring them home to their families. Children often infect each other at school.

If your child has a sore throat or a runny nose, it is not fair to send him to school and allow him to infect other children. It is far better to take care of him at home, and to seek proper medical advice if the condition does not clear up quickly. The longer the infection lasts the greater the danger to other parts of the body.

Here are a few methods of treatment that anyone can carry out at home. These simple measures will do much to help prevent the spread of disease within your family and among your friends.

When you have a sore throat, do this:

1. Take an enema to help clear the system.

2. Go to bed and rest until the infection subsides and you feel better. This will help you to re-

(Continued on p. 32.)



o not neglect a sore throat. It may be responsible for serious injury to the brain.



Photo· TASS

Collective Farmer Mahmud Aivazov, 149-year-old Azerbaijanian, is talkin with R. Rzayev (left), head of a tractor drivers' team, and K. Agayev, tract driver, of the Lenkoran Machine and Tractor Station.

ONE HUNDRED AND FORTY-NINE YEARS YOUNG!

Courtesy, TASS

A COLLECTIVE farmer of Azerbaijan, Mahmud Aivazov is getting on in years. He was seven years old when the battle of Waterloo was fought. He was already well on into middle age at the time of the Crimean War.

Aged 149, Aivazov has a vivid memory. In conversation he frequently talks about events that happened a century ago.

Despite his age, he still works on the collective farm—he is indignant at any suggestion that he should retire. He started work as a shepherd at the age of fifteen, so that makes 134 years of work—not a bad record!

Not, of course, that he's still a shepherd. Today he specialises in fruit and vegetables.

He had a big family, and today in the little mountain village of Pirsala, where he has lived all his life, there are over a hundred of his descendants.

The oldest is a daughter, who celebrated her 121st birthday last year; the youngest is a great-great-granddaughter, Afruza, who doesn't go to school yet.

Just recently he went to Moscow to visit the Agricultural Exhibition. It was the first long journey he had made in his life.

In Moscow he was keen to see everything. He arrived at the exhibition sharp at 9 a.m. each day, and stayed there until five.

When he returned home, he explained, he had to be able to give a full account of the Soviet capital to little Afruza.

The news of the exhibition's oldest visitor spread like lightning, and a crowd dogged his footsteps.

His step was steady and firm, he ran up the stairways with ease.

As he was entering one pavilion, someone pointed out an old man of eighty-six, heavily bearded, and said: "Look, there's someone like you!"

Mahmud glanced at the old chap with his kind, laughing eyes

and remarked: "He's still a child!"

Then he rolled up his sleeves, approached the old man and made a cheerful suggestion to him: "Gyuleshek?"

The old chap couldn't understand the Azerbaijan word, but it was plain from Mahmud's gestures that he was suggesting a wrestling bout. So, pretending to be afraid, the eighty-six-year-old "youngster" hurried away. A burst of laughter from everyone followed him.

Mahmud was continually beset by newspaper photographers and film cameramen. The cameras clicked away, the flashbulbs flared.

He posed patiently, but once he asked: "Why do you keep shooting and miss every time?"

He was invited everywhere, to see pavilions and meet exhibitors. He was photographed with visitors from China, India, Germany, and Norway.

He willingly accepted the invitations, but he spent most of his time in the Young Naturalists' pavilion.

He found it almost incredible that everything shown there had been grown by children. He spent a lot of time talking to the children telling them all about himself.

"I shan't talk about the old days," he said. "it's very sad to remember them. I'll talk about our times.

"As soon as a collective farm was set up in our village, I joined.

"Our collective farm is called Komsomol' (Young Communist) and so I regard myself as a member of the Komsomol.

"I don't lag behind the youngsters. Last year I had 270 work days to my credit.

"Age has no terrors for me. They say live and learn. I've lived 149 years, and still I've come to learn some more."

One day Mahmud went to tour the Kremlin. It was suggested that he go by the underground railway system, the Metro.

He looked distrustfully at his adviser, and said: "I don't think we'll go down there!"

He went on to the Lenin and Stalin Mausoleum, and from the Mausoleum to the Kremlin.

Moscow made a deep impression on Mahmud. As he was leaving for home he said: "Next year I'm coming again."

And then quietly he whispered: "Then we'll have a ride on that underground tramway!"

Mahmud Aivazov, 149-year-old Azerbaijanian, is one of the oldest men in the Soviet Union. He lives in a village located at an altitude of 2,100 metres above sea-level.

He has been working since his youth. For more than 100 years he was a shepherd, tending flocks in mountains and valleys.

Mahmud Aivazov together with his eldest sons took part in setting up a collective farm. He is still active and takes interest in new developments.

Aivazov is the head of a dynasty of 152 people. He is the father of 23 children. His oldest daughter is over 121. The members of his family include livestock breeders and teachers, fruit and grain growers and oil workers. Aivazov visited Moscow recently. He went to the Kremlin, the USSR Agricultural Exhibition, the University, and the Academy of Sciences.

The old man feels fine, he often rides on horseback, goes to the fields and likes to take a stroll in the orchard.

Mahmud Aivazov has a good memory and likes to crack a joke. He follows current events with interest.

RULES FOR GOOD HEALTH

Louise Price Bell

If you are careful to follow regular, general good health rules, you may be pretty sure that you will have good health. Good health means glowing skin, clear eyes, and abundant energy to do the tasks before you. You may avoid many illnesses by proper diet. Well-balanced meals give you necessary food values and keep your body in good working order.

As home-makers we should all realize that one of our responsibilities is to make sure that our families have well-planned, well-cooked, and well-served meals. Spend a bit of time on making foods appetizing in appearance.

Almost every family physician will agree that you can keep in better health if you supplement your diet with vitamins, vitamins suggested by them and taken according to direction by them—not haphazardly. It is a good idea to keep the bottle containing your vitamin tablets in the refrigerator or on the kitchen shelf, where you will see it at mealtime and remember to take your pill. Always be sure to replace cap and screw tightly, for, like most medications, these tablets deteriorate more quickly when exposed to air and moisture.

Exercise, fresh air, regular and well-balanced meals, and plenty of sleep at night, with windows open, will go far to keep you in good health. And there is nothing so valuable as your good health!

U. S. Surgeon Demonstrated

new surgical technique to cure deafness

Courtesy, U.S.I.S.

DR. SAMUEL ROSEN, renowned ear surgeon at Mount Sinai Hospital, New York, who has developed a revolutionary, but simple, surgical technique to cure deafness, was in Bombay, sharing his knowledge with Indian doctors.

The ear specialist has already performed more than a dozen operations successfully in various city hospitals in the presence of doctors from throughout India since his arrival in Bombay on December 11.

The new technique is particularly dramatic, for the patient's hearing is restored while he is on the operating table after a relatively short operation of about 20 minutes. The operation is performed under local anæsthesia without pain.

The patient is allowed to leave the hospital the following morning and may return to his work in another day or so. In a short time the patient may resume all his previous activities without any restrictions. After the operation no special care is necessary.

Dr. Rosen said that the operation is not applicable to those who had been deaf since birth and to the very aged.

"But this is helpful to a large group whose deafness began in the second, third and fourth decades of life," he added.

Dr. and Mrs. Rosen came to India in mid-November at their own expense to "share this new operating technique with the doctors of this country so that Indians may benefit from this latest advance in medical technology."

Dr. Rosen, who developed this revolutionary technique for curing deafness due to otosclerosis some five years ago, recalled how his fellow doctors in America had no faith in his discovery in the initial stages. He said:

"In my own hospital I could not get a man to come and see the operation. They carried on a propaganda saying, 'Do not go to see Rosen, it is not true.'"

It was only two years ago at a meeting of the American medic... men that some of them cared to s... "what Rosen is doing."

"I shall never forget the da...



Photo U.S.I.S.

Dr. Rosen is performing an operation at the K. E. M. Hospital, Bombay, watched by doctors from many parts of India.

these men came to the operating room and the discovery came to be acknowledged, because three of the four cases I operated on that day improved dramatically on the table," he stated.

Dr. Rosen observed that the operation is now being done very successfully in about eighteen countries he has visited and taught He felt sure millions of people could be helped to regain their hearing by this simple operation. He considered it a privilege to be able to teach the technique to surgeons in India—a country which he has always loved and whose philosophy of life he has always admired

The surgeon said he had successfully operated on more than 1,500 cases and expressed the belief that his technique had opened an exiting chapter in the future development of surgery for deafness

When asked what inspired him to go to other countries to demonstrate this new technique, Dr. Rosen answered: "If every man would mend a man, the world would all be mended." He is living up to this ideal by spending his vacation each year travelling to other countries to share his technique. Dr. Rosen is not sponsored by any government or foundation, but is himself meeting all expenses as his "personal contribution to international understanding." He performs all operations free He also presents a set of the special instruments he uses to each hospital he visits.

Dr. Rosen has already visited New Delhi, Calcutta and Madras. He left for the United States via London on December 15.

The famous surgeon, 59, studied in the College of Medicine at Syracuse University in 1921. Later he joined the Mount Sinai Hospital for post-graduate study and research and has since remained there. He is also a member of the medical faculty of Columbia University.

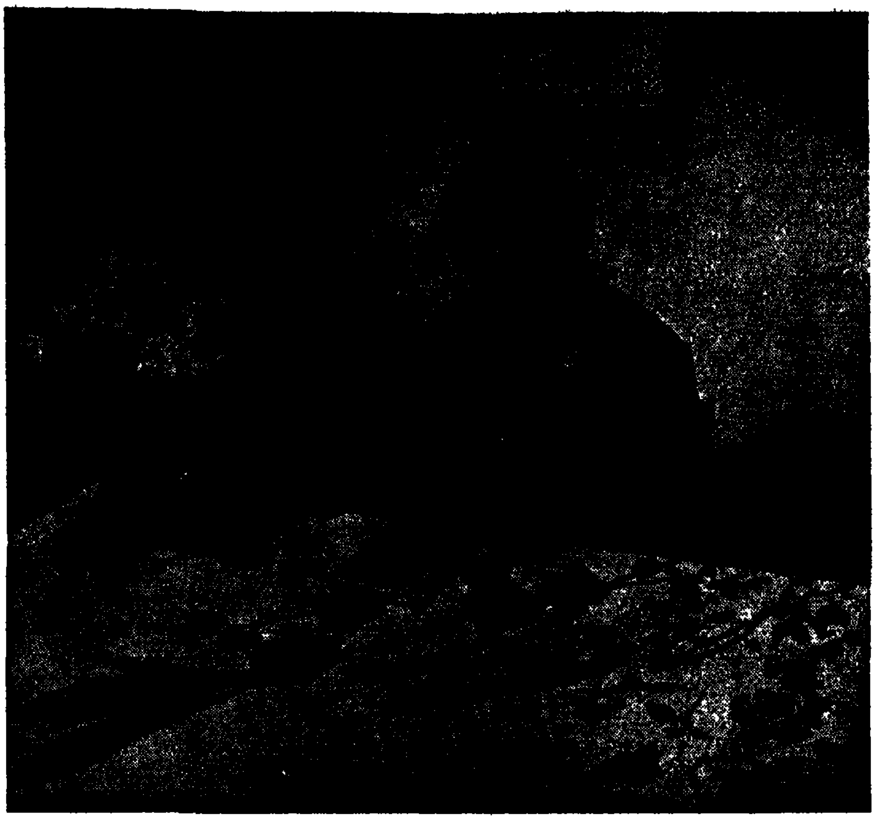


Photo U S I S.

Miss Libby Hirsch, a former dressmaker in New York City, demonstrates her unique craft of "painting with flowers." Using dried petals, leaves and ferns instead of pigments, she slides them into place on a satin-covered board with gentle nudges of a long, flexible file.

Ill-health leads U. S. woman to develop

a unique craft

Courtesy, U.S.I.S.

A LIFE-LONG love of nature, innate artistic ability and time on her hands are the ingredients of a unique craft developed by a semi-invalid in the United States.

Libby Hirsch, of New York City, obliged by ill-health to give up her work 13 years ago, "paints with flowers." Using carefully preserved specimens instead of pigments, and a "canvas" made of satin, she produces beautiful stylised floral arrangements encased in a picture frame.

Miss Hirsch is quick to disclaim that her work is art, calling it "merely a craft," but the effect has been called reminiscent of some produced by the French painter Picasso.

"I've always collected flowers and leaves just because I like them," she explains, "but it wasn't till 1943, when the doctor said I must give up my work as a dressmaker, that I started developing this method of painting with them."

Without training in art, in botany, or as a florist, she

(Continued on p. 28.)

How to Avoid A Heart Attack

J. DeWITT FOX, M.D.

As I write, I am sitting in a large lodge in the heart of the Michigan north woods.

The importance of a vacation as vividly impressed upon me just :fore we left home on our vaca- ɔn trip. I called my barber for ı appointment. He had left a few eeks previously for a vacation— ɛ first real vacation in thirteen :ars.

"May I have an appointment ith Mr. Schultz?" I inquired.

"Haven't you heard, Doctor?" s assistant asked. "Mr. Schultz ıd a heart attack out in Wyoming ıd died. He was buried just a ɛek ago."

"How old was he?" I asked.

"Just forty-nine. Left two fine ıildren—boy, twelve and a girl, ɛven."

Two days later, as we prepared come on this trip, I stopped by e Schultz home to leave a few ɔwers for his wife.

Mrs. Schultz's sister answered e door, and I spoke a few words sympathy to her. It was sad to ɛ Mr. Schultz's two beautiful ıildren left fatherless by tension, ɔrry, and over-work. I vowed I'd ss this story on to you in the ɔpe that you would take stock of ur life and see whether you have en missing the fun and frolic, the axation and rejuvenation, that uld make for a fuller, longer life.

In contrast with Mr. Schultz's perience, let me tell you of an l northwoodsman we met here Mio, Michigan, just yesterday. ɛ is past seventy-four, but every y of the world is a holdiday for n. He loves his wood country, d lives every day to the full. He ɔps wood for a pulp mill as his ly means of livelihood. His hands hard and gnarled, his grip n and solid. He stands erect and lks with his shoulders back, ıd held high.

'n his little church there are ers just like him—carpenters, ɔdsmen, labourers—but not one ɔ works by appointment and



close schedules. All they desire of life is good food, hard work, a good night's sleep, and a loving wife and family with whom to enjoy a few moments' relaxation in the evening. They are hard-working, God-fearing people. The thing that impresses me most is how seldom they have funerals.

As I look out on the peaceful lake at set of sun and feel the peaceful silence of the wildwood, I think these people up here have discovered how to avoid heart attacks. I recommend their method whole-heartedly to you.

In essence their philosophy is:

1. *Don't expect too much out of life.* Don't expect more than God deemed to be your lot. Don't try to do too many things in too short a time. Tight schedules make tight coronary arteries, and narrowed coronaries mean less and less blood to your heart—the vital organ that pumps life to your brain and body.

2. *Don't worry.* People who live the fullest lives take things as they come—one at a time. They don't fret and stew over petty details. They let things work out pretty much as the good Lord would have them.

3. *Smile.* Happy folks are healthy folks. The rugged, outdoor person loves a good laugh. A yarn, a good tale, or just a passing moment with a neighbour is enough to evoke a broad grin and a hearty chuckle.

4. *Take time to live.* Many city dwellers today live in the land of tomorrow, always planning for the future—a day off next week, a vacation next year, retirement in the distant future.

Unless we tuck a little enjoyment into each day, relax and live day by day, we are flirting with fate. Think of all your friends who passed away before that extra-nice vacation arrived, or a short time after they retired after many years of fine service.

You may have said to yourself, "Life cheated them." Actually they cheated themselves. Rich or poor, high or low, of whatever colour or creed, you and I have the same



Photo N. Ramakrishna

Happy folks are healthy folks.

twenty-four hours to spend each day. How we spend them determines how many tomorrows we will have to spend.

5. *Enjoy the real pleasures of life.* True pleasures don't come wrapped up in currency notes—big cars, palatial homes, or yachts on the lake. You and I have the same capacity for enjoying the creature comforts of life as a millionaire. We have the same brain, and just as many nerves for receiving the enjoyable impulses of life as he has. We have two eyes to see the sunset; a nose to enjoy the fragrance of the rose; a tongue to taste luscious strawberries or grapes and other delicious foods; ears to appreciate the music of birds, a mighty church organ, or the anthems of the choir; fingers to feel the velvety cheek of a baby; legs to walk through the countryside in search of green meadows, an old mill, a waterfall.

Yes, you have the same nerves, muscles, and body functions as a king on his throne. The only difference is the way you choose to stimulate those nerves. If your choice is traffic, tension, turmoil, telephones, television, bright lights, and a fast life (which your nervous system probably rebels against), you may have to pay the price for it all by added strain on body, brain, and heart. If you are willing to slow down a little—take a vacation, take a breather—you can better take the surge of city life.

6. *Keep limber.* Limber legs last longer. Certainly the man who exercises his big muscles of back, shoulders, and legs is going to keep limber longer.

7. *Watch your weight.* Few if any of these woodsmen who dodge heart attacks are over-weight. They are rangy fellows; hearty eaters, but of good old-fashioned food that makes for muscle, not fat. They live on a simple diet of milk and other protein foods, potatoes, green vegetables, and as many fresh fruits as they can obtain. Of course in the winter-time canned foods are their mainstay .

8. *Have faith in God.* Few of these people are worrying about what the Joneses have. They know that if the Lord above is looking after the sparrows, He is certainly looking after His own. As children of faith they go to church each week, bow and ask God's protection and guidance. Their vocabulary is not large, their requests in prayer are not complex, but their faith is limitless.

With such a carefree, faith-filled life, how could these people have heart attacks? Their coronary arteries don't know what narrowing or spasm is. When they die, it's just old age that takes them. The faithful pump simply wears out finally. It isn't squeezed to death in the manner that we city dwellers choose to end it all, in heart attacks.

If you and I would avoid a heart attack, let's take more vacations, every day, every year; make life a long and leisurely affair, rather than a tightly compressed capsule to be downed in abbreviated time.

Actually, life is like an accordion. We can stretch it out to 80, 90, yes, 100 years, if we live it leisurely. We can compress it into 40 or 50 frantic, hectic years, and have an early heart attack.

Many a heart victim resents life and the blows it has dealt. The long-lived healthy people take the blows in stride and push on, feeling that life is ever a challenge, a happy thing; and that it is truly wonderful to be alive.

If life has lost its lustre, I heartily recommend to you a carefree vacation in some secluded spot. If I can persuade you to take it, I guarantee that you will be adding extra days of real living to your life span and doing much to avoid a heart attack. Make a vacation a *must* every year.



Dynamic Living

PAUL K. FREIWIRTH

If the rules of health go against your grain keep your eyes on your future and persevere.

"HOW does Mr. Blank get so much done? He works long hours in the office, he spends much time with his family, he has several hobbies, he belongs to two civic clubs, he is always up to date on what's going on in the world, yet he's never too busy to stop for a friendly visit."

Perhaps you made this remark about your neighbour. Perhaps you asked your neighbour to share his secret, but he modestly confessed he knew of no magic formula that enabled him to live more intensely and abundantly.

There is no magic plan for dynamic living. It takes nothing more than systematic adherence to a few simple time-tested rules. Some of them may appear to be distasteful at first, but in the long run they may pay rich dividends in terms of happiness and success.

The most important principle of dynamic living is faith in the goodness of life. This philosophy provides incentive for all worth-while achievement and enterprise.

A group of workers in a large factory were asked what they desired most from their labours. Good wages and pleasant working conditions received their share of mention but they were outranked by another factor—the longing for appreciation and recognition of the significance of their work. They placed recognition before remuneration.

If you have faith in the worthwhileness and goodness of life, you

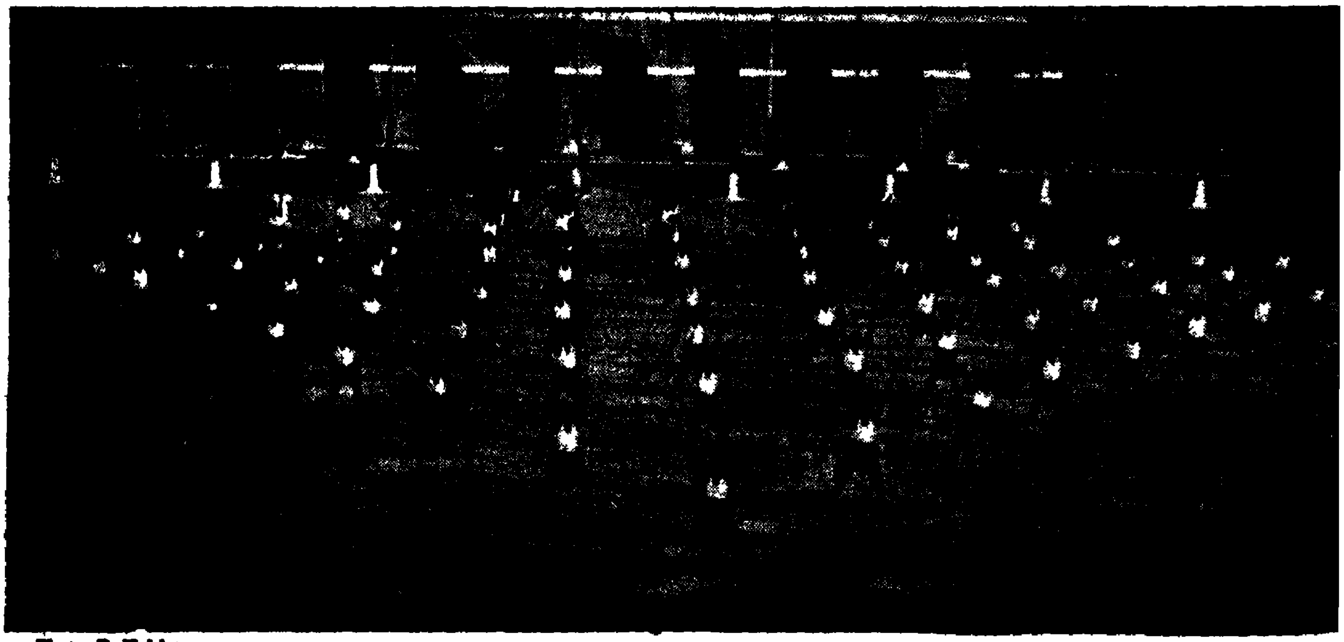


Photo: R. Krishnan

Recreation is an integral part of dynamic living. No matter how much you enjoy your occupation and your after-hou activities or how easy you find them, you need regular periods of recreation and change.

will be far too happy to be concerned about when and whether your labour receives due appreciation or whether it has a future. The absence of this emotional knot will release additional amounts of power for creative endeavour.

Faith in life's worth-whileness will save you from another drain on life's vital forces—the depressing question: "What are others thinking about me?" No fear can be more confusing than this, for it slavishly subjects your behaviour to society's whims and wishes. From the psychological stand-point, people who always stop to consider what others think before deciding on a course of action lack both security and adjustment.

More than thirty-five hundred years ago an Eastern sage outlined the future of one of his sons thus: "Unstable as water, thou shalt not excel." These few words contain a wealth of personal insight. Those who are greatly concerned about making a good impression show emotional instability and flounder from one goal to another, dissipating their energies. Their passionate striving to please and excel is a barrier between themselves and happiness, for success is one of life's most enervating and enslaving demons if idolized for its own sake.

True success consists of finding what you like and can do and sticking to it, regardless of what others think. There can be no



swinging back and forth from one thing to another.

A leading personal counsellor wisely admonishes men and women to focus, dedicate, and discipline life's latent energies. Decide what you want to make of your life, resolve that you will direct all your drive to realizing that aim, and don't be afraid of being a little hard on yourself! Before you can actually carry out this threefold plan, you must revise your mental attitudes.

First of all, you must learn to bury the past.

"You have more energy than anyone I know," someone once remarked to Mrs. Eleanor Roosevelt.

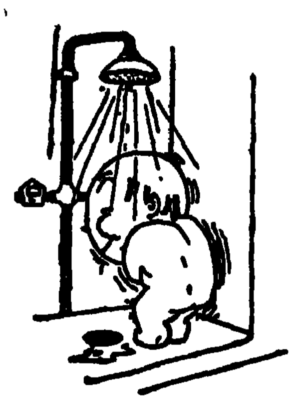
"It isn't that I have so much energy," she replied, "it's just that



I never waste any on regret or indecision." Regret—confused thoughts on the past—indecision and muddled thinking about the future consume vital energy that could otherwise be directed toward the attainment of worth-while goals.

Don't take yourself too seriously. Go about your work in an easy and relaxed way. Don't let your nerves get taut. The famous Italian singer Enrico Caruso is said to have sung high musical notes that cracked delicate glassware. People also are broken when life's notes are pitched too high.

Never work to the point of exhaustion. Discover the extent of your body's endurance capacity, and abide by its limitations. Don't resort to stimulants such as drugs, liquor, cigarettes, tea, and coffee to pep you up. The practice is habit



forming, drains stores of energy, and makes for jumpy nerves. If you want a good stimulant, take a cold shower first thing in the morning, using a friction mitt to put you in a glow.

The secret of avoiding working until you become exhausted lies largely in systematic planning. Don't leave things to the last moment. It isn't worth the worry and the strain.

There is much genuine satisfaction in constantly keeping ahead of yourself. This pleasure may inspire you to play one of life's most enjoyable games—being in competition with yourself. There is no greater satisfaction than to watch yourself increase the quantity and quality of your output. This game is more fun than being in competition with others—nobody finds out when you are the loser.

It is surprising how much you can do in gradually increasing your work capacity without impairing your health. Once you have discovered your productive horizon, don't descend to lower levels; stay up there. There is tremendous force in the power of habit. Bad habits begin as cobwebs and end up as iron chains, but so do good ones. They can become the magic means for making any activity easier and less tiring.

A signpost in Canada informs motorists of sub-standard conditions of the road thus: "Choose your rut—you'll be in it the next twenty miles!" On the road of

(Continued on p. 29.)

DIET AND HEALTH

(First of Two Parts)

ELLEN G. WHITE

OUR bodies are built up from the food we eat. There is a constant breaking down of the tissues of the body; every movement of every organ involves waste, and this waste is repaired from our food. Each organ of the body requires its share of nutrition. The brain must be supplied with its portion; the bones, muscles, and nerves demand theirs. It is a wonderful process that transforms the food into blood, and uses this blood to build up the varied parts of the body; but this process is going on continually, supplying with life and strength each nerve, muscle, and tissue.

Those foods should be chosen that best supply the elements needed for building up the body. In this choice, appetite is not a safe guide. Through wrong habits of eating, the appetite has become perverted. Often it demands food that impairs health and causes weakness instead of strength. We cannot safely be guided by the customs of society. The disease and suffering that everywhere prevail are largely due to popular errors in regard to diet.

In order to know what are the best foods, we must study God's original plan for man's diet. He who created man and who understands his needs appointed Adam his food. "Behold," He said, "I have given you every herb yielding seed, . . . and every tree, in which is the fruit of a tree yielding seed; to you it shall be for food." Upon leaving Eden to gain his livelihood by tilling the earth under the curse of sin, man received permission to eat also "the herb of the field."

Grains, fruits, nuts, and vegetables constitute the diet chosen for us by our Creator. These foods, prepared in as simple and natural a manner as possible, are the most healthful and nourishing. They impart a strength, a power of endurance, and a vigour of intellect, that are not afforded by a more complex and stimulating diet.

But not all foods wholesome in themselves are equally suited to our needs under all circumstances. Care should be taken in the selection of food. Our diet should be suited to the season, to the climate in which we live, and to the occupation we follow. Some foods that are adapted for use at one season or in one climate are not suited to another. So there are different foods best suited for persons in different occupations. Often food that can be used with benefit by those engaged in hard physical labour is unsuitable for persons of sedentary pursuits or intense mental application. God has given us an ample variety of healthful foods, and each person should choose from it the things that experience and sound judgment prove to be best suited to his own necessities.

Nature's abundant supply of fruits, nuts, and grains is ample, and year by year the products of all lands are more generally distributed to all, by the increased facilities for transportation. As a result, many articles of food which a few years ago were regarded as expensive luxuries, are now within the reach of all as foods for everyday use. This is especially the case with dried and canned fruits.

Nuts and nut foods are coming largely into use to take the place of flesh meats. With nuts may be combined grains, fruits, and some roots, to make foods that are healthful and nourishing. Care should be taken, however, not to use too large a proportion of nuts. Those who realize ill effects from the use of nut foods may find the difficulty removed by attending to this precaution. It should be remembered, too, that some nuts are not so wholesome as others. Almonds are preferable to peanuts, but peanuts in limited quantities,

d in connection with grains, are irishing and digestible.

When properly prepared, olives, : nuts, supply the place of butter 1 flesh-meats. The oil, as eaten the olive, is far preferable to mal oil or fat. It serves as a ative. Its use will be found ıeficial to consumptives, and it is healing to an inflamed, irritated stomach.

Persons who have accustomed themselves to a rich, highly-stimulating diet, have an unnatural taste, and they cannot at once relish food that is plain and simple. It will take time for the taste to become natural, and for the stomach to recover from the abuse it has suffered. But those who persevere in the use of wholesome food, will, after a time, find it palatable. Its delicate and delicious flavours will be appreciated, and it will be eaten with greater enjoyment than can be derived from unwholesome dainties. And the stomach, in a healthy condition, neither fevered nor over-taxed, can readily perform its task.

In order to maintain health, a sufficient supply of good, nourishing food is needed.

If we plan wisely, that which is most conducive to health can be secured in almost every land. The various preparations of rice, wheat, corn, and oats are sent abroad everywhere, also beans, peas, and lentils. These, with native or imported fruits, and the variety of vegetables that grow in each locality, give an opportunity to select a dietary that is complete without the use of flesh-meats.

Wherever fruit can be grown in abundance, a liberal supply should be prepared for winter, by canning or drying. Small fruits, such as currants, gooseberries, strawberries, raspberries, and blackberries, can be grown to advantage in many places where they are but little used, and their cultivation is neglected.

For household canning, glass, rather than tin cans, should be used whenever possible. It is especially necessary that the fruit for canning should be in good condition. Use little sugar, and cook the fruit only long enough to insure its preservation. Thus prepared, it is an excellent substitute for fresh fruit.

Wherever dried fruits, such as raisins, prunes, apples, pears, peaches, and apricots are obtainable at moderate prices, it will be found that they can be used as staple articles of diet much more freely than is customary, with the best results to the health and vigour of all classes of workers.

There should not be a great variety at any one meal, for this encourages over-eating, and causes indigestion.

It is not well to eat fruit and vegetables at the same meal. If the digestion is feeble, the use of both, will often cause distress, and inability to put forth mental effort. It is better to have the fruit at one meal, and the vegetables at another.

The meals should be varied. The same dishes, prepared in the same way, should not appear on the table meal after meal and day after day. The meals are eaten with greater relish, and the system is better nourished, when the food is varied.

It is wrong to eat merely to gratify the appetite, but no indifference should be manifested regarding the quality of the food, or the manner of its preparation. If the food eaten is not relished, the body will not be so well nourished. The food should be carefully chosen and prepared with intelligence and skill.

For use in bread-making, the superfine white flour is not the best. Its use is neither healthful nor economical. Fine-flour bread is lacking in nutritive elements to be found in bread made from the whole wheat. It is a frequent cause of constipation and other unhealthful conditions.

The use of soda or baking-powder in bread making is harmful



Photo: Gobind Lal

Our bodies are built up from the food we eat.



and unnecessary. Soda causes inflammation of the stomach, and often poisons the entire system. Many housewives think that they cannot make good bread without soda, but this is an error. If they would take the trouble to learn better methods, their bread would be more wholesome, and, to a natural taste, it would be more palatable.

In the making of raised or yeast bread, milk should not be used in place of water. The use of milk is an additional expense, and it makes the bread much less wholesome. Milk bread does not keep sweet so long after baking as does that made with water, and it ferments more readily in the stomach.

Bread should be light and sweet. Not the least taint of sourness should be tolerated. The loaves should be small, and so thoroughly baked that, so far as possible, the yeast germs shall be destroyed. When hot or new, raised bread of any kind is difficult of digestion. It should never appear on the table. This rule does not however, apply to unleavened bread Fresh rolls made of wheaten meal without yeast or leaven, and baked in a well-heated oven, are both wholesome and palatable.

Grains used for porridge or "mush" should have several hour's cooking. But soft or liquid foods are less wholesome than dry foods, which require thorough mastication. Zwieback, or twice-baked bread, is one of the most easily digested and most palatable of foods. Let ordinary raised bread be cut in slices and dried in a warm oven till the last trace of moisture disappears. Then let it be browned slightly all the way through. In a dry place this bread can be kept much longer than ordinary bread, and, if re-heated before using, it will be as fresh as when new.

Far too much sugar is ordinarily used in food. Cakes, sweets, puddings, pastries, jellies, jams, are active causes of indigestion Especially harmful are the custards and puddings in which milk, eggs, and sugar are the chief ingredients. The free use of milk and sugar taken together should be avoided.

If milk is used, it should be thoroughly sterilized; with this precaution, there is less danger of contracting disease from its use. Butter is less harmful when eaten on cold



bread than when used in cooking; but, as a rule, it is better to dispense with it altogether. Cheese is still more objectionable; it is wholly unfit for food.

Scanty, ill-cooked food depraves the blood by weakening the blood-making organs. It deranges the system, and brings on disease, with its accompaniment of irritable nerves and bad tempers. The victims of poor cookery are numbered by thousands and tens of thousands. Over many graves might be written: "Died because of poor cooking"; "Died of an abused stomach."

It is a sacred duty for those who cook to learn how to prepare healthful food. Many souls are lost as the result of poor cookery. It takes thought and care to make good bread; but there is more religion in a loaf of good bread than many think. There are few really good cooks. Young women think that it is menial to cook and do other kinds of housework; and, for this reason, many girls who marry and have the care of families have little idea of the duties devolving upon a wife and mother.

Cooking is no mean science, and it is one of the most essential in practical life. It is a science that all women should learn, and it should be taught in a way to benefit the poorer classes. To make food appetizing and at the same time simple and nourishing, requires skill; but it can be done. Cooks should know how to prepare simple food in a simple and healthful manner, and so that it will be found more palatable, as well as more wholesome, because of its simplicity.

Every woman who is at the head of a family and yet does not understand the art of healthful cookery should determine to learn that which is so essential to the well-being of her household. In many places hygienic cooking-schools afford opportunity for instruction in this line. She who has not the help of such facilities should put herself under the instruction of some good cook, and persevere in her efforts for improvement until she is mistress of the culinary art.

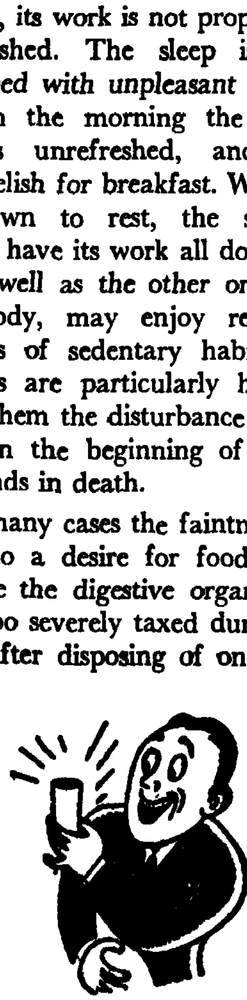
Regularity in eating is of vital importance. There should be a specified time for each meal. At this time, let every one eat what the system requires, and then take nothing more until the next meal



There are many who eat when the system needs no food, at irregular intervals, and between meals, because they have not sufficient strength of will to resist inclination. When travelling, some are constantly nibbling if anything eatable is within their reach. This is very injurious. If travellers would eat regularly of food that is simple and nutritious, they would not feel so great weariness, nor suffer so much from sickness.

Another pernicious habit is that of eating just before bedtime. The regular meals may have been taken; but because there is a sense of faintness, more food is eaten. By indulgence, this wrong practice becomes a habit, and often so firmly fixed that it is thought impossible to sleep without food. As a result of eating late suppers, the digestive process is continued through the sleeping hours. But though the stomach works constantly, its work is not properly accomplished. The sleep is often disturbed with unpleasant dreams, and in the morning the person awakes unrefreshed, and with little relish for breakfast. When we lie down to rest, the stomach should have its work all done, that it, as well as the other organs of the body, may enjoy rest. For persons of sedentary habits, late suppers are particularly harmful. With them the disturbance created is often the beginning of disease that ends in death.

In many cases the faintness that leads to a desire for food is felt because the digestive organs have een too severely taxed during the ay. After disposing of one meal, the digestive organs need rest. At least five or six hours should intervene between the meals; and most persons who give the plan a trial, will find that two meals a day are better than three.



Food should not be eaten very hot or very cold. If food is cold, the vital force of the stomach is drawn upon in order to warm it before digestion can take place. Cold drinks are injurious for the same reason; while the free use of hot drinks is debilitating. In fact, the more liquid there is taken with meals, the more difficult it is for the food to digest; for the liquid must be absorbed before digestion can begin. Do not eat largely of salt, avoid the use of pickles and spiced foods, eat an abundance of fruit, and the irritation that calls for so much drink at meal time will largely disappear.

Food should be eaten slowly,

(Continued on p. 28.)

Bugs in Your Life

THOMAS G. HILL, Ph.D.

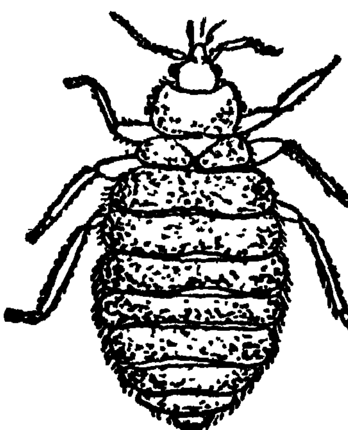
Disease-carrying insects may produce tragedy out of proportion to their size.

THE scientists call them arthropods, those "bilaterally symmetrical, metrimerically segmented forms" that you swat energetically. To you they are just plain insects, and they bite as fiercely by that name as any other.

The true insects have six legs (hexapods)—flies, mosquitoes, bed-bugs, lice, and fleas. There are about 75,000 different kinds of flies and mosquitoes *(Diptera,* two wings) in the world, about 2,000 kinds of lice, and numerous kinds of fleas. Some of these insects are without economical importance, others are serious pests that do great damage, and a few are carriers of human disease.

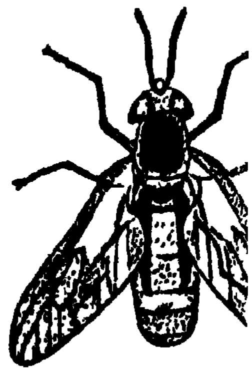
The common housefly, the most familiar of all insects, lacks the ability to bite. It would be considered no more than a nuisance were it not for the intimate contact it maintains with family life and for its insatiable curiosity,





which causes it to investigate every little particle of dust or dirt. If disease germs are present, they are picked up on the peculiarly constructed feet of the fly and carried to the kitchen, the dining table, or baby's face. Typhoid fever, bacillary dysentery, amœbic-dysentery, tuberculosis, and numerous other infections may be spread in this manner.

The deer-fly and the horse-fly are encountered in woods and fields in many parts of the United States. Both are vicious biters. The transmit bacteria mechanically o their mouth parts—tularemia, c rabbit fever, by the deer-fly, an anthrax by the horse-fly. The bitin stable fly, about the size of th housefly, is found around stabl and houses. It has a most anno ing bite, but carries no disease. Th so-called "no-see-um" is a fly s tiny that it will pass through ord nary screens. It has a fierce bit



MANGO FLY

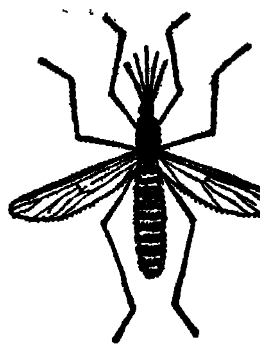
for so small an insect, but is othe wise harmless.

In other parts of the world fli are important factors in disea transmission. In certain areas i Africa the tsetse fly carries the tr panosomes of African sleeping sic ness. Several kinds of sand flies a responsible for such diseases a Kala-azar (black fever), orient sore, pappataci fever (three-da fever) and Oroya fever.

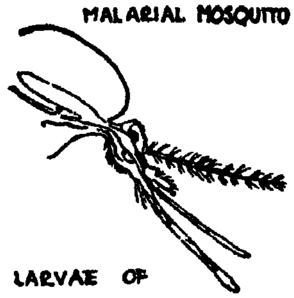
Blow-flies and bottle flies a widely distributed over the worl including the United States. The lay their eggs in open wounds c man and animal, where the ma gots hatch. Some of them eve penetrate the unbroken skin to la their eggs.

Mosquitoes, in addition to mal ing life miserable for man, carr a variety of diseases. Only the fe males suck blood.

Culex are the most commo mosquitoes in temperate zone Several species carry the virus o equine encephalomyelitis (inflam mation of the brain and spin cord) and St. Louis encephaliti



MALARIAL MOSQUITO



LARVAE OF FILARIA BANCROFTI IN THE PROBOSCIS OF A MOSQUITO.

(inflammation of the brain) from birds and horses to man. In the tropics they transmit filariasis (a disease caused by parasitic worms).

Anopheles mosquitoes, easily identified because they stand on their heads when they bite, are responsible for spreading malaria. Most species are night fliers, but a few bite in the daytime as well. Once infected, they remain so for life Some species also carry the virus of equine encephalomyelitis and St. Louis encephalitis.

Aedes (mosquitoes) are among man's worst enemies. *Aedes ægypti,* commonly known as the yellow-fever mosquito, is domestic, breeding only in or near human habitations. Yellow fever has been eliminated from the United States, but the mosquitoes that transmit disease are still here. Dengue r (break-bone fever), found in e of the Southern States, is transmitted by this mosquito.

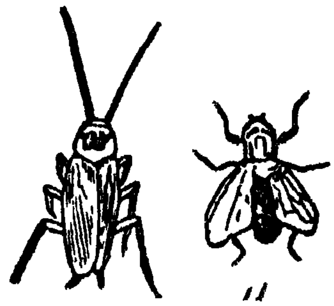
here are many species of ædes ortant because of their fierce The salt-marsh mosquitoes of ' Jersey and of the Pacific st belong in this group.

ther mosquitoes of numerous kinds could be mentioned, but the most important have been discussed.

The three kinds of lice that cause disease in man are the head louse, the body louse, and the crab louse. The body louse, known as the "cootie" may be present in enormous numbers in the clothing. All three are persistent biters.

The head louse and the body louse spread epidemic typhus fever and relapsing fever. The crab louse is said to carry relapsing fever but not typhus fever.

Human diseases are carried from animal to animal by certain other lice. The rat louse spreads the virus of typhus fever among rats, and the rabbit louse tularemia



among rabbits. Neither of these bites man.

Fleas have no wings, but they are powerful jumpers, making it possible to transfer themselves from one host to another at will. Each different kind of flea has a particular animal for which it shows preference, but most fleas are not averse to taking a meal where they can get it.

Fleas are blood suckers, and while feeding they regurgitate disease bacteria from their stomachs into the wound. They also defecate while feeding, and the fæces containing disease bacteria may be rubbed into the wound.

The human flea, *Pulex irritans,* is well named, for it is an annoying little insect. The only disease it transmits is bubonic plague.

The Indian rat flea is the most important vector of bubonic plague, being responsible for millions of human deaths. A dozen other kinds of fleas, found on rats, dogs, cats, squirrels, and other animals, transmit plague, but to a lesser extent. Sylvatic plague, common in ground squirrels in Western United States, is carried by squirrel fleas, but rather rare contact with man results in very few human cases.

Typhus fever is carried by rats (this type is designated as murine typhus) and is spread by rat fleas. Human cases of the disease are rather common in the Southeastern part of the United States.

The dog flea and the cat flea pick up the eggs of the dog tapeworm from the fæces of the dog or cat. Children playing with dogs or cats swallow the fleas or crush them in their fingers, then suck the fingers. Certain fleas swallow the eggs of the rat tapeworm, and are eaten by man, usually with cereal products.

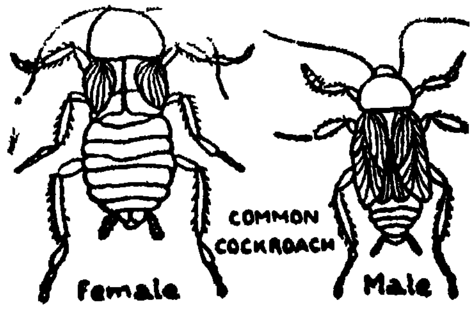
The chigger, or sand flea, is the smallest flea known. It carries no disease, but causes irritation by penetrating the skin

Many things that crawl are commonly called bugs, but the scientist has designated one group as true bugs, of which the bed-bug and the kissing bug (assassin bug) are members.

The bed-bug feeds on human blood, but it ordinarily carries no disease. It is a nuisance, however and difficult to get rid of.

Assassin bugs, of which there are various kinds, are vicious biters. Sometimes they are called kissing

(Continued on p. 29.)



STORY TIME

SLEEPY OLD CARLO—PART II

Keith Moxon

(SYNOPSIS: Jeannie and Peter did not love their dog, Carlo, any more because he was suffering from rheumatism. The dog was half blind, they complained. Mother reminded the children that Carlo had always been a friend to them and now they owed him a debt of gratitude. The children did not think that they owed him any debt whatever.
Then one day Jeannie and Peter found themselves caught in a snowstorm. They hurried wearily toward home, but home was far away.)

BUT now waves of exhaustion came rushing over the girl. The double burden was too much. She lowered the boy to the ground, and sank down herself. The snow-flakes began to fall faster and faster, until all around was a curtain of falling snow, hiding everything from view.

Jeannie huddled close to her brother, telling him that soon the snow would stop and then they would be able to go on

But the hours wore on, and there was no abatement in the soft falling snow. Little Peter fell asleep and lay with his head on his sister's lap

Every now and then Jeannie would scratch the snow that tried to cover them, anxiously looking for a sign that the storm was diminishing, but to no avail. She began quietly weeping in her fear, and trembling in the cold that was now stealing through her clothes. And weariness began to claim her. She tried to fight it for a time, but then decided that she would just



have a little nap. It would make her feel refreshed, and then she would be better able to look after Peter.

Still supporting her brother's head on her lap, she got down on one elbow and closed her eyes As she fell asleep she slipped slowly down until she was lying with her head on the snow.

A white mantle began to spread over them, now unhindered. They still slept on as the twilight came, and the blackness of night closed over the scene

Two or three hours before this, back on the farm, Mrs. Curitis had seen the approach of the storm. At the first snowflakes she had gone to the window and searched the hill-



side where she knew the children had been tobogganing. No sight of them there.

Just to be sure, she put on her coat and ran across to the barn where her husband was working. No trace.

It was not time to get anxious yet, Mrs. Curtis told herself, but something hastened their footsteps. She and her husband both went to the hillside, where they found the forsaken toboggan almost covered with snow. Anxiety now unconcealed, they returned to the farm and went in different directions to check every possible place where the children might be.

The minutes ticked by. No children. There was no doubt now to the stricken parents. Their children were not at home. They were out in the snowstorm!

Carlo, as usual, was dozing by the kitchen fire. But his doggy mind was suddenly jarred into wakefulness by the sound of Mrs Curtis weeping. He opened his eyes to see his mistress, pale-faced and



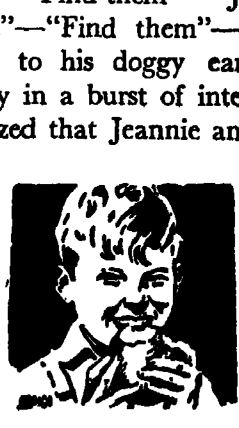
trembling, wiping her eyes with her handkerchief as she stood at her husband's elbow at the telephone

Several times Mr. Curtis laid the receiver down and raised it again, calling different homes, inquiring as to his children's whereabouts, and then asking whether someone could come over and help search for them.

Carlo did not understand all this, but his sense told him that something was wrong. He waddled slowly round, curious now at all the excitement.

The appearance of numbers of strange people responding to the Curtis's call for help was a challenge to him, and he lumbered around barking and whining almost ceaselessly.

Again and again the words "Peter"—"Find them"—"Jeannie" – "Lost"—"Find them"—"Look" —came to his doggy ears, and suddenly in a burst of intelligence he realized that Jeannie and Peter



were not there, and that everybody was trying to find them. *He* knew where they were. They were tobogganing on the hillside. He'd get them.

Unnoticed by the people coming and going, Carlo slowly made his way to the door and into the twilight.

All night long the search continued with lantern and flashlight. Mrs Curtis forbidden to leave the house, boiled innumerable hot drinks and made numberless sandwiches.

At the sound of approaching searchers she would fly to the door, and peer with glazed eyes into the night, crying, "Any word?"

"Nothing yet, Nothing yet!" would come the sad reply. And then more hot drinks and sandwiches, more talk, more encouraging words from everybody.

But Mrs Curtis could not forget the thermometer hanging outside window, and she tried not to look at the little coats hanging behind the kitchen door.

And then the shouts! And with the shouts, barking! Hope rushed up like a kindled fire, and Mrs. Curtis sprang from the door.

In the distance she heard them crying, "Found, they're found! Thank God!"

Choking back tears and laughter both, Mrs. Curtis burst coatless into the chilly midnight air to meet the laughing, shouting throng. One man held Peter, another Jeannie, and borne along by two lads was an excited barking dog—Carlo!

"Well, Mother, no need to have worried about their coats," laughed Mr. Curtis "They had the warmest, cosiest comforter you could imagine!" Mrs. Curtis hugging Jeannie and Peter by turns, did not answer at first, but she had heard.

"Comforter? What—w h a t—" she stammered, starry-eyed and mystified together.

"It was Carlo!" chorused the group, and then everybody guffawed and shrieked at the thought.

"I heard Carlo barking," spoke up one of the men, "and when we got there here was this big, fat thing lying directly on top of the children like a great bearskin! The kids sound asleep, and warm as toast under him in a hollow in the snow."

"I woke up sometimes," mumbled Peter sleepily. "Carlo was heavy." And then they guffawed and shrieked again

Many were the cuddles given that night, not only to the children, but to Carlo. Everyone that came in must rub his head and tickle behind his ears. He had never had so many bones at one time to deal with. And the special attention did not end that night.

From that day on a small girl named Jeannie went out of her way to give more than a little affection to the dog. Carlo had begun at last to collect on his debt of gratitude.

EDUCATING DEAF CHILDREN

(Continued from p 2.)

Education of the Deaf at Manchester University, originated an approach by which the foundation of a deaf child's language and subsequent educational progress could be laid even before the age of two This early education is given by the parents acting under expert guidance.

A parent whose child is found or suspected to be deaf may be referred by a doctor or otologist to one of the guidance clinics for such children which have been established in some cities in Britain Some of these clinics are attached to hospitals, others have been organized by Public Health Departments working in collaboration with Education Committees. They have facilities for making accurate tests of hearing, and offer to parents, whose children require home training, information about their child's individual needs.

Parents are shown how to give the child practice in interpreting such sounds as he can be enabled to hear, and advised on ways of making use of the incidents and routines of the child's home life to encourage understanding of speech through lip-reading and spontaneous attempts to talk.

The policy of making an early start is also reflected in the lowering to five years of the age when education is compulsory for deaf children, and in the full-time special education they must be given from the age of two years, if this is thought necessary or desirable. It is also to be seen in the establishment of nursery schools and nursery units which are attached to day-schools

AT SCHOOL TILL SIXTEEN

Deaf children, who at five years or earlier (depending on progress made in their home training) need continual help with speech and full-time general education of the kind which can only be given by qualified teachers of the deaf, are required to attend special schools until they are sixteen. The Education Act of 1944 made local education authorities in England and Wales responsible for providing special educational treatment appropriate to all categories of handicapped children.

Many special schools for deaf children were founded by voluntary bodies but are now maintained or assisted by local authorities. These children study the same subjects as normal children, but their progress

(Continued on p. 36.)

HOMEMAKERS' HELPS

TO DRINK OR NOT TO DRINK?

M. Minaj Larson

MOST mothers think with horror of the possibility of any of their children becoming alcoholics. It is the ardent wish of every mother and father that their children become good, wise, and useful.

I recall the quiet pride of a well-to-do father in New York as he told us of the ambition of his sixteen-year-old son to be a teacher. If he so wished, he had every opportunity of learning the intricacies of a prospering business, but something else had been instilled into the mind of that boy by his parents. "What greater work can there be than that of teaching?" the father asked.

Thus it rests with parents to train their children in the principles of temperance, as with other things, and to so instil these principles into their minds that they will have no other thought than to live soberly and abstemiously. There will be no question as to their firmness in following the principles of self-control, temperance, and healthful living.

The temperate habits of many of the great leaders of India are well known to us. We also are familiar with the temperate habits of great world leaders of the past. We honour these leaders for their stand and for the inspiration they give us to turn our feet more and more into the paths of self-control, temperance, and worth-while living.

How can we bring up our children so that they will be temperate and shun alcohol?

Temperance in the home should be a habit. We need to be temperate in our sleeping. Our children should have fixed hours for retiring and for arising. It is well known that children need much sleep not only to relax and to rest from the day's activities, but also to give the body sufficient opportunity for the repair of tissues and also for proper growth. A child that does not sleep enough does not grow well, and is bound to be irritable and even cross.

We need to teach our children self-control with regard to regularity in eating. Our meals should be served at specific times. These times should be carefully planned with the whole family in mind so as to suit the needs of all. Nothing should be allowed between the times set apart for meals. Not only

RECIPES

Baked Savoury Brinjal

Two cups of diced brinjal (8 oz. cup); 1 medium onion, chopped; ½ cup chopped capsicum; 1 cup chopped tomato; 1½ teaspoonfuls salt; ½ cup buttered bread crumbs; 3 tablespoonfuls oil.

Boil the brinjal in salt water until just done. Place in a greased baking dish. Cook the onion, green pepper, and tomato in the oil. Season with salt, and add this mixture to the brinjal. Sprinkle top with buttered crumbs. Bake in moderate oven (350° F.) about 25 minutes, or until brown. Approximate yield: 6 servings.

Tomatoes on Toast

Eight tomatoes; 2 tablespoonfuls oil; salt to taste; 4 slices toast; ½ cup cream; 1 tablesoonful flour.

Cut the tomatoes in half. Cook on both sides in the oil, until soft. Salt the tomatoes and place half of them on pieces of toast. Cut the rest of the tomatoes into small pieces and add the cream and the flour. Cook until thick. Pour over the tomatoes on toast and serve hot.

Potatoes and Carrots with Parsley

Two cups (8 oz. cup) carrots cut into 2-inch strips; 2 cups potatoes cut into 2-inch strips; ½ cup minced parsley; 5 tablespoons melted margarine, or butter, or oil

Cook the vegetables in a minimum of water, until tender. Add parsley ond melted margarine just before serving. Serve hot.

Candied Sweet Potatoes

3 cups cooked, sliced sweet potatoes; ½ cup jaggery syrup; 2 tablespoonfuls butter or margarine or oil; 1 cup water; salt to taste.

Boil the sweet potatoes in a minimum of water, until tender They are more tasty if steamed Slice into one-fourth-inch-thick slices. Lay neatly in an oiled baking dish, salting as you place the slices into the dish. Mix the jaggery with the water, pour over the potatoes, dot with butter, and bake for 30 minutes or a little longer in a medium oven. These are delicious at any time.

lo children learn self-control when ıeld to this sort of programme, but hey profit healthwise, for medical cience has proved over and over ıgain that food taken between neals destroys the healthy tone of he digestive organs, prolongs digestion, keeps the digestive organs rom receiving the rest that they ıeed, and causes fretfulness and rritability.

It is at the family table that nany children learn habits of intemperance, for the food served them is often of such a nature that it causes a craving that leads to the drink habit. The food needs to be plain and should be prepared with nothing that will cause any irritation or inflammation of the digestive organs. The diet should include a liberal supply of the vegetables and fruits that are in season. It is better not to serve many varieties at any one meal, but to vary the different kinds available from meal to meal.

The simpler the food and the more simply prepared, the better will be the health of the entire family, and the greater will be the opportunity of developing those habits of simplicity and temperance in the children that will not be characterized by a craving for strong drink.

Let there be no drinking of alcohol in the home. That which the children see their parents do they will desire to emulate. The abstemiousness of the parents is a large factor in determining the future habits of their children. Besides abstemiousness teach your boys and girls to abhor all stimulants.

Get all the scientific information that you can regarding the properties and effects of beverage alcohol. It is a startling thing to learn that mere traces of alcohol in the blood first affect and impair, intelligence and self-criticism, remove inhibitions and restraints. Nor does the damage end there. Psychomotor skills, or mechanical judgments, are likewise impaired; a person with just a small quantity of alcohol in his blood takes longer to react to any given situation such as, for example, in deciding how far to turn the steering wheel of a motor-car. A person who has had only one or two beers, or one or two cocktails is six and a half times more likely to have a motor-car accident than is the motorist who has no liquor in his system.

We need to present such information to our children. Much information regarding the evil effects of liquor is now available. Besides giving our children the scientific effects of beverage alcohol on the body, we must also educate them as to the social and economic effects, the misery and suffering, that alcohol brings in its train.

Read the lives of great men and women to your children. Show them how the temperance, the sobriety, and the abstemiousness of world heroes down through the centuries has helped them to serve their fellowmen and their country.

Help your children to learn self-control in their everyday experiences. As they learn to control their words, their tempers, their appetites, their reading habits, their sleeping, they will be learning how to say "NO" to that which is harmful and evil.

We need to develop and preserve the best of our physical, mental, and spiritual powers. With habits of temperance in all things, our intelligence and the other powers of our minds increase, and these can thus be used to be a blessing to our families and to our fellowmen.

It is on such simple things as these that the practice and habit of temperance and complete abstention from alcohol depend. And, Mothers, it depends on us.

HOUSEHOLD HINTS

- If you wish to prevent the milk from sticking to the bottom of the degchi, rinse it out with cold water before pouring the milk into it for scalding.
- Before melting chocolate which is to be used in cooking, grease the dish in which it is to be melted.
- If you would like your green vegetables to be green after being cooked, cook them in an open vessel without any acid.
- If boiled potatoes or other white vegetables have turned yellow, they may be made white again by adding a little lime juice.
- A little lime juice added to beetroot will make them a brilliant red colour.
- If vegetables or fruits are peeled and are left to stand before cooking, there is a loss in the vitamin value. It is better to cook them whole and with the outer covering on.
- Foods lose their vitamin value when they are fried.
- Did you know that raisins are rich in food iron? Use them often in various ways. They are good, eaten "as is," with perhaps a little coconut or a few nuts of some kind. And raisins added to the morning rice or porridge provide a dish that will be called for again and again.
- Slide fasteners are coming to the fore. Before laundering any clothing with attached slide fasteners instead of the customary buttons, be sure that the fasteners have been closed.

THE EDITOR SAYS

(Continued from p. 5.)

the producer, it is a cash crop which is a disease-producing crop, a habit-forming crop, a crop which leads to the wastefulness on the part of the public. It leads to the degeneracy of the race and a number of other conditions which we could go into but which for lack of space we will not consider at this time. Also it occupies the ground that could be more profitably and sensibly utilized for the production of food stuffs.

While we recognize that our friends who are engaged in the tobacco trade may not appreciate these words, we feel that in any case it is necessary to clarify our position with reference to tobacco —its cultivation and use.

The latest figures that we have concerning smoking and its relationship to cancer come from the American Cancer Society in a study that they made of 188,078 men between the ages of 50 and 69 over a period of 32 months. During this time 8,105 men died —168 from lung cancer. An analysis of the figures as released by the American Cancer Society reveals that among heavy smokers —those who smoke two packs of cigarettes a day, for example, there is one case of lung cancer in every 148 men. Of those who smoke moderately—that is those who use less than two packs of cigarettes a day, there is one case of lung cancer in every 710. Among ex-smokers of cigarettes—those who have smoked but do not smoke now, there is one case of lung cancer in 996 men. Among pipe smokers there is one case in 2,020 men. But of startling and of primary interest to us in this publication these figures reveal that for non-smokers there is only one case of lung cancer in 16,230 men.

These figures should be definitely revealing to an individual who is sensible and who is willing to open his mind to facts—to recognize *that conditions which exist, do exist because of some cause; that every effect must have a cause and that there must be a very definite relationship between lung cancer and the smoking of cigarettes and also pipes, though to a lesser degree, apparently.*

While we do not wish to be offensive in our attitude concerning the use of tobacco, we feel that it is our responsibility to inform the public and keep them informed concerning the general principles of healthful living in all of its many aspects.—L. J. L.

DIET AND HEALTH

(Continued from p. 21.)

and should be thoroughly masticated. This is necessary, in order that the saliva may be properly mixed with the food, and the digestive fluids be called into action.

Another serious evil is eating at improper times, as after violent or excessive exercise, when one is much exhausted or heated. Immediately after eating there is a strong draft upon the nervous energies; and when mind or body is heavily taxed just before or just after eating, digestion is hindered. When one is excited, anxious, or hurried, it is better not to eat until rest or relief is found.

The stomach is closely related to the brain; and when the stomach is diseased, the nerve power is called from the brain to the aid of the weakened digestive organs. When these demands are too frequent, the brain becomes congested. When the brain is constantly taxed, and there is lack of physical exercise, even plain food should be eaten sparingly. At meal time cast off care and anxious thought; do not feel hurried, but eat slowly and with cheerfulness, with your heart filled with gratitude to God for all His blessings.

(Concluded Next Month.)

A UNIQUE CRAFT

(Continued from p. 13.)

developed and perfected this craft which has become nearly a full-time hobby.

A city dweller, Miss Hirsch has no special garden for growing her plants. "I don't need one," she says, "because I live near a public park and always vacation in the country where I can collect plenty of material from fields and gardens."

Careful preservation of the specimens is the first step. Miss Hirsch wraps them in damp cotton and presses them between the pages of a heavy book until they are thoroughly dry. "It takes the collections of several seasons before you can hope for a really artistic piece," she points out.

Working with these dehydrated plants requires the utmost delicacy, and even though her fingers were long trained for fine needlework, Miss Hirsch touches the specimens as little as possible. Choosing petals, colours and ferns carefully to produce the desired effect, she places them on a satin-covered, cushiony board, nudging them gently into position with a long, flexible nail file—her only tool. She long ago gave up using tweezers as being too clumsy. When she is satisfied with the design she has composed, she seals it into place by the glass of the picture frame.

No two of Miss Hirsch's flower arrangements are alike. Sometimes she uses as a model a fresh bouquet which is always on the work-table of her apartment studio, but the result is a picture of stylised elegance quite different from the arrangement of live flowers. Most of her work is done from a mind's-eye image of the effect she wants to create.

Miss Hirsch has exhibited her unique "flower paintings" at craft shows, a small art gallery, and at the Museum of Natural History in New York City.

DYNAMIC LIVING

(Continued from p. 17.)

life as well, travellers fall into ruts. But they have the privilege and power of choice.

Your general mental attitude toward your work is of great importance. You cannot always do what you like, but you can learn to like what you have to do. A favourable attitude of mind takes the weight out of the most burdensome chore, releasing extra energy for additional tasks.

A woman once threatened her landlord that she was moving because her neighbour annoyed her with his incessant music. Then she learned that the quaint gentleman from abroad was none other than Paderewski, the famous concert artist. She not only decided to keep her apartment but proudly invited her friends to listen. What a tremendous difference mental attitude makes.

Recreation is another integral part of dynamic living. No matter how much you enjoy your occupation and your after-hour activities or how easy you find them, you need regular periods of recreation and change.

Dynamic living is relaxed, happy, busy living without worry. Keep in mind the cornerstone of dynamic living—focus, dedication, discipline.

BUGS IN YOUR LIFE

(Continued from p. 23.)

bugs because the wound is inflicted at the edge of the lip while the person is asleep. They transmit Chagass' disease (American trypanosomiasis) in South America, and assassin bugs infected with this disease have been encountered in the United States.

The tick is not an insect but an arachnid, and numerous varieties are found in different parts of the world. Those of importance from the medical stand-point are hard ticks (wood ticks) with protruding head, and soft ticks (argasid ticks) with the head concealed under the edge of the body.

The wood tick, found in Western United States, and its close relative, the dog tick, found in the East, South, and on the Pacific Coast, are serious offenders for several reasons.

When an attempt is made to pick off the tick while it is feeding, the head often remains in the flesh as the body is pulled away, resulting in an irritating sore.

Because of a substance injected into the wound by the tick to prevent coagulation of the blood, hæmorrhage may result.

Paralysis from tick bites may be fatal to children. Both the wood tick and the dog tick transmit tularemia and Rocky Mountain spotted fever from animals to man. Rocky Mountain spotted fever infection is passed from adult ticks to young ticks through the eggs. Certain parts of the country are dangerous for man during the tick season. In other countries other kinds of typhus are spread by ticks.

The argasid tick, several varieties of which are found in the United States as well as in Africa, transmits relapsing fever from various wild rodents to man.

Various ticks elsewhere are responsible for transmitting other infections, such as Q (Queensland) fever, from cattle in Australia, and louping ill from sheep in England.

Mites are very small arachnids that infest various animals as well as man. Some of them cause severe skin infections, and others may carry disease.

The tropical rat transmits murine typhus fever from rats to man in the United States, and the kedani mite spreads mite typhus (tsutsugamushi disease) from rats to man in the Southwest Pacific and Japan. The chicken mite does not bite man, but may be responsible for spreading equine encephalomyelitis and St. Louis encephalitis in poultry.

The control of insects has been facilitated by the use of DDT. Flies and mosquitoes are destroyed by a spray of a 5 per cent solution in kerosene, but death is not immediate. For a quick knock-down a pyrethrum spray in oil should be used. Flies recover from this spray however, so they must be swept up immediately and destroyed. The various provisions required for the destruction of breeding places and for screening should not be neglected.

Other insects in the home, such as bed-bugs, fleas, cockroaches, and ricks, may be destroyed by DDT,

5 per cent in oil or a 10 per cent dust.

DDT in oil is absorbed through the skin of persons, with some possible danger, but the dust is harmless if not inhaled. During the second world war large groups of the people of Southern Europe were dusted with DDT power to destroy lice. The result was no epidemic of typhus fever—a disease that has always accompanied wars heretofore—and that was well on its way to reaching epidemic proportions when DDT became avai able. Dogs may be dusted with 1 per cent DDT powder to kill flea but cats should not be so treate They "wash" themselves with the tongues, and would swallow to much of the powder.

GARDENING FOR HEALTH

THE CULTURE OF BEANS

D. G. Cooper

One of the easiest to grow, and possibly the cheapest of all vegetables, is the Indian Bean. There are innumerable varieties ranging from the popular French, Runner and Broad Beans, to the equally popular Valpapdi, Gawar and Cholai Beans, etc.

All kinds of beans, especially the Broad and Kidney varieties, are rich in protein and form an excellent vegetable substitute for meat. Analysis show, that half a cupful of Lima or Kidney beans, contain practically the same amount of protein, as a large helping of meat. Surely this is a gift of God to mankind, since both rich and poor alike can share the benefits of this health-giving vegetable.

The culture of beans is simple, and since it does not require a very rich soil, it will thrive everywhere with minimum care A light sandy loam, enriched with a little stable manure or wood ash, is the best soil for beans. Do not plant the beans too closely together. A glimpse at the reference table provided below, will furnish details regarding the correct time in which to sow the seeds, and the distance required between the plants.

It is necessary to keep the soil friable, by hoeing once a week from the time the seedlings appear. However, it should be borne in mind, never to cultivate the soil when the plants are wet from dew or rain, as it generally causes Rust disease. Moreover, in watering the plants, run the water at the roots and avoid spraying the foliage Beans prefer semi-shade to bright sunlight, and especially in the case of the Runner Beans, if it is sown near a trellis or fence, it will not only receive support, but shade as well. The plants of the Dwarf Beans should have their tops pinched off just as they begin to flower. This will cause the bushes to be more compact, and the yield will be considerably increased. For a continuous supply of Beans, make successive sowings every three weeks. This does not apply to Runner Beans, as one sowing is sufficient for the entire season.

In case of an attack by Black Aphis, the plants should be sprayed with a Nicotine solution, or dusted with Nicotine Dust. Occasionally fungus disease develops on the bean pods, causing black spots to appear on the pods. Dusting thoroughly with copper lime dust, may hold the disease in check.

Name of Seed	Time to Plant		Distance for Plants	
	Plains	Hill Stations	Between Rows	In Rows
French Beans	Aug to Oct.	March to June	2 to 3ft.	3 to 6 in.
Lima Beans	Sept. to Nov.	March to June	2 to 3 ft	10 to 36in.
Runner Beans	June to Oct	March to June	4ft.	2½ to 3ft
Broad Beans	Sept to Nov	March to June	2 to 4 ft	10 to 20in

GARDEN CALENDAR FOR MARCH

Plains

Vegetables: Sow Cucumber, Squash, Parsley, etc Remove soil from Asparagus beds and replace with new soil well enriched with manure.

Fruits Protect Litchee plants with nets. Manure Strawberry beds using Bonemeal. Water Peach, Plum and Mango trees copiously. Remove old soil from Plantain beds, and apply fresh cow manure, water liberally.

Flowers. Dahlia bulbs to be lifted and stored. Plant Easter Lily, Zephyranthus, Achimenes, Amaryllis bulbs, etc. Prune Poinsettias.

Hills

Vegetables· Sow Beans, Peas, etc. Artichoke tubers to be planted.

Flowers: Sow Sweet Peas, Candytuft, Mignonette, Begonias, etc. Re-pot ferns.

TREAT TONSILS NOW

(Continued from p. 9.)

cover more quickly, and it will also prevent spreading the infection to others.

3. Take warm baths daily to stimulate the system and help the body throw off the infection. Guard yourself carefully against becoming chilled during such a bath. Dry yourself quickly and return to bed without delay.

4. Apply a heating compress to the throat. This is an old-fashioned treatment, but a very useful way of caring for a sore throat. It will work wonders in many cases, if it is carried out for several days.

Take a cotton cloth about fifteen inches square and fold it into several thicknesses about three inches wide. Dampen it with cold water and wrap it around the neck. Cover it with two thicknesses of woollen material. Leave it on for eight to ten hours. Keep the patient warm and in bed. He must not become chilled while having such a treatment. This caution is most important. Do not forget it.

Apply a heating compress again as often as needed. It is of great value in treating sore throats, hoarseness, tonsillitis, and laryngitis. The use of a heating compress may save many a child from having to have his tonsils removed.

5. Steam inhalations are often of real value in treating nose and throat infections. One simple method that can be used at h is to heat a small pan of w until it is steaming, add a teaspc ful of eucalyptus oil or ment and camphor. Hold your h over the pan, drape a large to over it, and inhale the vapour several minutes, not longer. K warmly covered during the tre ment and do not become chill If you should become chilled y will be worse, not better, after yc treatment.

This treatment will relieve inflamed sinuses and the r piratory passages of the nc throat, and chest.

6. Take plenty of fluids a fruit juices. Water helps to k the whole system operat smoothly. The fruit juices cont minerals and vitamins. Especia those rich in vitamin C help to h the tissues. Fruit juices will a act as mild laxatives.

7. Take a gentle laxative needed. Sometimes a fruit diet all that is necessary to clear colon

8. Call your doctor if yc throat does not clear up rapidly. he finds that your tonsils are b he may advise that they be r moved after the acute infection h quieted down. In any case, it well to have competent medic advice. Don't take any chances

Remember, there is no su thing as a simple sore throat. Eve sore throat is serious, whether yc have your tonsils or whether th have been removed. We may n realize it, but many of us may l carrying dangerous germs arou in our throats. The pain and sor ness may be nature's way of telli us that we are a danger to ou selves and to those around us.

You are doing your friends a associates a real wrong when yc expose them to your illness. Th may lose valuable working tin through your neglect of hygien If you want to be strong a healthy and help others to be s treat your tonsils now!

Giving Is Living

(Continued from p. 5.)

returned to the air to be taken up by the plant, and thus it starts around the circle again."—Frank Marsh in "Review and Herald," June 26, 1947.

All nature obeys the divine command: "Give and live." Man alone seeks to receive without giving, to live without imparting. But all who do this are doomed to failure. The inexorable laws of nature are against them. We need to do some serious thinking about this. Our happiness will depend on a right understanding of this principle.

We may improve the state of human society by beginning at once to serve. For a starting place begin at home. Good deeds will starve out selfishness and prove to be a blessing to you as well as to others. This twice-blessed ministry will kindle a new fire in your bones and send the blood coursing through your veins. With keener minds and brighter lives you can charge the atmosphere with the vital current of loving service. It will be hard going at times, but you can develop the habit of finding something that needs doing, and do it.

You can give words, kind words. You can "write your name on hearts in kindness and you will never be forgotten."

You can give your time, and listen. Listen to disappointed souls who wanted life another way and were disillusioned. With the spiritual stethoscope you can hear the heart troubles of the desponding, and listening, you can minister.

You can give things. Flowers, bread, clothing, and money will minister to the sick and hungry, the naked and the poor.

Then you can give love. To the wife, the husband, the children, the relatives, and neighbours, you can minister simple affection. Even to your enemies you can go with love—go the second mile, even the third and the fourth.

Let it be your aim and purpose to give something every day. You may find ways of being helpful if you will try. The consciousness of right doing will prove to be one of the best medicines for tired bodies and wearied minds. With a sense of duty well done you may be free from fear, and happy in a new life. Why not get started today? Giving is living!



THE DOCTOR SAYS

1 This question and answer service is free only to regular subscribers

2 No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases

3 All questions must be addressed to The Doctor Says Correspondence personally with the doctor is not available through this service.

4 Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES Answers cannot be expected under ONE MONTH

5 Questions sent in on Post Cards will not receive attention

6 Make questions short and to the point Type them or write them very clearly

7 Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published Address "The Doctor Says," Oriental Watchman and Herald of Health, P O Box 35, Poona 1

GOUT: Ques.—"What causes gout? What precaution should be taken to prevent it and what measures—dietetic and others—should be taken when the attack is expected or has actually arrived?"

Ans.—Gout occurs most often in men of middle age. The cause is unknown, although it has been attributed to diet indiscretion, excessive intake of alcohol and a sedentery existence.

Uric acid is the end product of Purine Metabolism. The Nucleoproteins in the body is the principle source, while such ingested substances as the kidney, liver, thymus, pancreas and certain fish such as sardines, are the main source of Uric acid from foods. The deposition of Sodium Urate in soft and bony tissues resulted in the formation of the painful nodules. Treatment consists in refraining from eating the foods mentioned above, the ingestion of alcohol, the use of tobacco, tea and coffee. Colchine is a specific, but is a dangerous drug The use of Cortisone ACTH is very effective, but is not curative. During an attack, bed rest and a soft diet are indicated. The involved joint should be put to rest under a cradle as early as possible.

?

IRREGULAR MENSES: Ques.—"I had an abortion a few months ago and since then my menses are irregular. Please prescribe some treatment for me."

Ans.—The irregular menses is due, no doubt, to an unbalance of the hormones following the abortion a few months ago. I would advise an examination by a well-qualified physician, who would then be in a position to prescribe proper treatment.

?

GROWTH ON BACK: Ques.—"My ı, one year old now, had a small, normal growth on his buttocks at th. This has grown to the size of mall coconut. What should be done out it?"

Ans.—I would urge you to take ur one-year-old son to a well-qualid physician at once to determine nature of the growth on his ttocks.

?

DREAMS: Ques.—"How are eams caused? Are the brain, eyes nervous system affected by dreams? How does one prevent them?

Ans —Dreams are caused by overactivities of the brain during sleep. They may be in a large measure controlled by going to bed with an empty stomach Five hours at least *should elapse between taking the last* meal and going to bed.

?

INTESTINAL GAS: Ques.—"What produces gas in the intestines?

Ans.—Gas is produced in the intestines by the action of certain bacteria on intestinal contents. The legumes of certain types of sugar are especially prone to cause gas. Sometimes however, it is due to a habit of swallowing air. By eliminating gas-producing foods from the diet (a food that may cause gas with one person may not cause it with another. So each one should try to discover what foods produce gas in his own system), by refraining from swallowing air and/or by taking some drugs as Terramycin or Aureomycin, which will destory intestinal bacteria formation, gas may be stopped.

?

HORMONES: Ques.—"In a recent lecture here by a highly qualified medical man on the Problems of Old Age it was stated that very important in prophylaxis were vitamins and hormones. We have been reading a lot about vitamins; could we have *something detailed about hormones?"*

Ans.—Hormones are very complicated chemical substances produced by various glands in the body, which along with the nerves control the functions of the body. The master-gland is the pituitary gland situated at the base of the brain. This gland more or less directs and controls, through the hormones it secretes, the other glands of the body and many other body functions as well, such as the thyroid gland in the neck, adrenal gland, kidneys, pancreas, sex glands, liver, parathyroid, etc.

When a person ages, glandular function decreases. Thus it is sometimes important, but not usually so, to give hormone therapy to elderly people. Just as we give hormones to those who for some reason or other lack them. Insulin for diabetes is such a hormone; when the pancreas fails to produce this hormone, the person has diabetes. The Insulin hormone derived from the pancreas of animals is injected by needle and supplied to diabetics. Hormones are not only extremely important, but they are also very dangerous to use, and should be used only under the constant supervision of a well-qualified physician.

?

DISTENDED STOMACH: Ques.—"It is three months since my wife gave birth to a child. But her stomach is still big, as in the 7th or 8th month of pregnancy. What can this be due to?"

Ans.—The size of your wife's stomach is probably due to fat that was deposited there during the pregnancy. Many women while pregnant put on extra weight. I would suggest you have her examined by a qualified physician to rule out the possibility of any abnormal ties.

?

PAINFUL URINATION: Ques.—"My urine is cloudy, and has an offensive odour. Sometimes there is a feeling of obstruction when voiding. I suffer from constipation and have pain all over my body."

Ans.—I would advise that you have a urinalysis to determine the possibility of the presence of urine infection. This can cause pain, if present, in various parts of the body.

THE LAST WORD

Health and Hospitals

One of the most modern hospitals in the world, built by British and local contractors and equipped by British firms, was opened on February 4, at Doha, capital of the British Protectorate of Qatar, in the Persian Gulf.

Estimated to have cost over £4,000,000, the hospital has 130 beds with 44 single wards, and 30 rooms in which medical cases can be dealt with. The operating theatre has its own electronically-controlled air-conditioning plant supplying sterilized, dust-free air at any required temperature and at any degree of humidity.

The opening ceremony, at which representatives of the British Medical Association were present, was performed by the Shaikh of Qatar—*B. I S*

Drugs and Schizophrenia

Certain drugs can produce hallucinations and other symptoms like those of schizophrenia All of them—lysergic acid, mescaline, bufotenine and adrenochrome—belong to a class of chemicals known as indoles. This raises the tantalizing possibility that schizophrenia might not be a disease produced by fret and worry Instead, it might come from production of abnormal indoles in a person's body, which then poison the body and produce the mental disease, says Dr. Howard D. Fabing, Cincinnati psychiatrist. If this possibility is correct, it might lead to drugs to cure this costly ailment.—*Today's Health*

Schizophrenia and Abnormal Sperm

Studying men with schizophrenia, Dr. M. Leopold Brodney of Boston finds that they produce abnormal sperm. The discovery may give new clues to the nature of this most serious of all mental ills. In schizophrenia, "there seems to be some toxic substance in the body which causes a deviation of sperm production." This is another bit of evidence for a chemical cause or effect in this mental illness. Patients with other forms of mental disease seem to produce normal sperm.—*Today's Health.*

Foot Powder and Perspiration

A new foot powder that protects feet against injuries caused by cold weather, has been developed by the U. S. Army Medical Service. It is designed to reduce the amount of perspiration. Tests show that it reduces foot sweating by as much as 24 per cent.

Man's feet perspire under almost all conditions, but the secretion of the sweat glands is especially harmful in cold weather. The freezing temperatures of winter cause particles of perspiration to crystallise and become conductors of cold. This condition diminishes the value of socks and shoes as insulators against the low temperatures outside.

The new preparation consists of a talc base that contains aluminium chloride and potassium alum, the compounds that absorb perspiration. It also contains boric acid, salicylic acid and starch.

Anæmia and Drugs

Information about a new anti-anæmia drug is given by the chairman, Mr F. G. C. Fison.

Mr Fison says that the new product—called Imferon—for the treatment of iron-deficiency anæmias has lived up to its early promise and has now been accepted by the British Ministry of Health as a new drug of proven value, freely prescribable under the National Health Service in Britain.

The discovery, he adds, has aroused world-wide interest, and in countries which are not readily accessible licence arrangements for its manufacture are being made.—*B. I. S.*

Cancer and Mortality

Next to heart diseases, cancer is the largest cause of death in the majority of highly developed countries. Highest on the list of cancer deaths—from 39 to 73 per cent of the total, according to countries—are those caused by cancer of the digestive organs (œsophagus, stomach, small intestine including duodenum, large intestine, rectum, biliary passages, liver, pancreas and peritoneum).

Important factors concerning cancer in these various sites are to be found in the statistical publication made by the World Health Organization (WHO) on mortality from malignant neoplasms of digestive organs and peritoneum in twenty-six countries since the beginning of the century.

Mortality from cancer of the digestive organs is higher in men than in women. Stomach cancer is responsible for the majority of cancer deaths in both sexes, immediately followed by cancer of the large intenstine and the rectum.—*B. I. S.*

Love and TB

A hard-headed Scottish physician, David Morris Kissen, practising among working-class victims in the unromantic setting of Lanark, has reached a diagnosis of the emotional state which predisposes to tuberculosis. It results, he reports in the Scottish *Health Bulletin*, from an "inordinate need for affection." But this alone is not enough; it requires the triggering action of a "break or serious threat of a break in the love link," using the word love in its spiritual (sense). . . . Two-thirds of the TB victims studied by Dr. Kissen reported having had such a break, or threat of one. Some of the breaks resulted from death in the family and enforced separations; the vast majority occurred in a "romance engagement or marriage."

Emotional factors were more conspicuous in patients who were over 35 when their TB was first diagnosed than among younger victims. For the latter, loss of a parent's love was a major consideration. To double check his findings, Dr. Kissen studied patients whose TB, once fully controlled, had flared up again. Among these, he found 60 per cent whose personality and history fitted the pattern.—*Time.*

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Dates Delight and Daily Diet

Dates belong in the daily diet, for not only are they rich in iron and minerals, which keep the body built up, but they are a No. 1 source of quick energy. Best of all, they are delicious. As the Arabs say, the date is "meat, sweet, and medicine!"

DATES for centuries have been the favourite food of romantic Old World tribes. On the hot desert sands the date palms are as welcome as the water oasis, and the long-lived Arabs are noted for rugged health.

Dates provide carbohydrates generously, small amounts of fat, protein, and minerals, especially iron, calcium, and phosphorus. They are also a good source of vitamins A and B.

The Arabs had a saying that the



date palm must have its head in the sun and its roots in water. Date palms were irrigated by hand or watered by nearby rivers or springs.

There are many ways to use dates that can add a delicious touch to any meal. When combined with milk or cottage cheese, they constitute a perfect food. Sliced on cereal, they are delicious. Dates added to cheese, cream cheese, or peanut butter make a delightful sandwich on dark bread. Added to any cake or cooky recipe, they aid the finished product to remain moist. A favourite with children is a date milk shake, with ground dates whipped into milk.

Powdered Orange Juice

GOLDEN oranges and yellow grapefruit are undergoing many changes these days. First they were shipped round the country in the peel, later in a tin can, then as a frozen concentrate. But the latest is a new instant orange and grapefruit powder. The instant juice will come in the form of crystals that will dissolve quickly in cold water. In colour, flavour, and aroma the instant juice will be hard to tell from freshly squeezed citrus juice, say the developers, Orange Crystals, Inc., of Plant City, Florida.

The juice can be stored for six months at 100°F without losing flavour or vitamin value, according to tests by the U. S. Department of Agriculture and the Quartermaster Corps.

Vacuum drying under a controlled heat process, plus the addition of two chemicals, seems to be the secret of this new type of orange juice. One of the chemicals, sorbitol, is a sugary material used to entrap the oils and esters, giving the citrus fruits its pleasant flavour and aroma.

The second chemical is a drying substance that comes in a small envelope inside each can of the orange juice crystals.

The advantage of the new product is, of course, the saving in shipping space, weight, and storage without refrigeration.

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I, L. C. Shepard, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Dated February 28, 1957

(Signed) L. C. Shepard
Publisher

EDUCATING DEAF CHILDREN

(Continued from p. 23)

depends heavily on the proficiency they acquire in lip-reading, and their energies are concentrated on learning to speak, read, and write the English language

This process has been helped by advances in electronic engineering which have made available to teachers powerful, high-fidelity hearing-aids. Investigations carried out in schools and diagnostic clinics have shown that there are very few children (about six to seven per cent of those correctly classified as deaf) who cannot, with modern equipment, be enabled to have some auditory perception of speech, though in many cases it is extremely limited.

Now that it has been found possible to teach even very young children, it is realized that the sooner deafness is ascertained the better. Important work in this respect has been done by Dr Irene Ewing and Professor A. W. G. Ewing, who, having investigated the response to sound of normally hearing babies, evolved a series of hearing tests suitable for use in infancy and early childhood. Voice, sibilant consonants, pitch pipes, percussion instruments, and other distracting stimuli of measured loudness are used and the response noted.

Children of school age can generally be taught to co-operate in audio-metric and speech tests. As a result of such tests, children who require them are provided with individual hearing-aids under the National Health Service scheme, which came into operation in 1948.

HEARING-AIDS

The regular use of hearing-aids, particularly in pre-school years, has enabled some severely deaf children to acquire speech which, though defective, is fluent and colloquial, instead of monotonous and laboured. In the case of others even more severely deaf, hearing-aids have assisted their realization *of the vocal character of speech and have accelerated their progress in lip-reading, the result has been an all-round improvement in emotional adjustment and general* mental development.

Children whose hearing is impaired but whose handicap would not prevent them from acquiring some speech naturally have rapidly freed their speech from inaccuracies and defective pronunciation through the use of hearing-aids. The advantages of early auditory experience and training in use of residual hearing have made it possible for some partially deaf children to enter ordinary infant schools and to keep pace with their normal contemporaries in all school subjects. Others who have made less progress may enter special schools or classes for partially deaf children, being transferred to an ordinary school later if **their educational progress ju such a move.**

These arrangements e clearly the flexibility of appr and modifications according t dividual needs, which were re ***nized in the Education Act of 1 as indispensable elements of spe*** *educational treatment. The aim was argued, should not be to seg* gate handicapped persons fr their contemporaries, but to gi them independence within a no mal community which uses spe and written language as its maj means of communication.

Since the war, two schools ha been founded in Britain for de children who are intellectual gifted- the Mary Hare Gramm School in Newbury, Berkshire, an Burwood Park Secondary Techn cal School for boys at Walton-o Thames, near London. The schools are evidence of a convi tion that the normal field of op portunity should be opened to de children to the fullest extent con sistent with their handicap

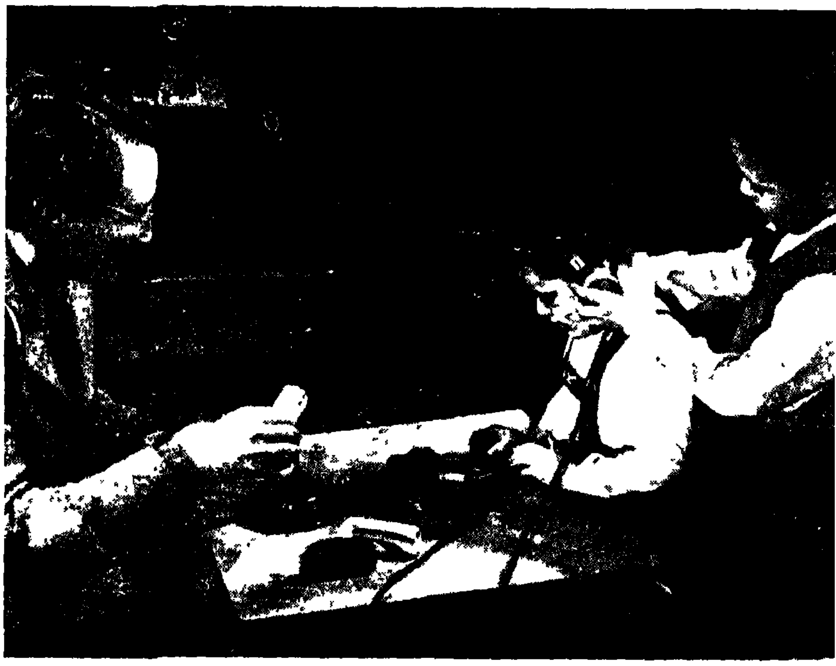


Photo B I S

In the Auditory Unit of the Department of Education of the Deaf, Manche University, children are taught how to overcome the problem of deafness w the help of toys Here playing a new "game" is four-year-old David Rutter six-year-old brother, John, has persuaded him to wear earphones, and when th are adjusted the instructor will say the word "bus" David will hear her and her lip movement, associating both sound and lip movement with the toy h out to him. This method of teaching is adopted with children who can norm hear very little sound.

The Oriental Watchman and

Herald of Health

A Magazine for Home and Happiness



What Trouble Does to Us

HELEN L. TONER, B.D

The way you look at your problems is an index to the way you manage life.

"IT'S surprising the hard knocks some people take and still carry on!" My companion shook her head as we left the hospital room of Elise, a friend whose courage was astounding. She had spent months in an iron lung as a polio victim, and was now learning to control the muscles of her abdomen so that she could sit up without being propped or held upright.

A young widow, she had left her son in the care of her mother. The mother herself had been ordered to take several weeks bed rest. We went to cheer Elise and offer our help, but we came away knowing that no one would ever need to pick up the pieces of her life.

There was a quiet sureness about her, as if she had an inexhaustible supply of strength and poise that she could tap whenever she needed it. Her courage and resourcefulness fell on my friend and me like a refreshing rainfall.

Earlier that afternoon we called on a friend with a fractured arm. We found her wallowing in self-pity because her only son had received an overseas assignment with the Armed Forces.

What explains the difference in people's reactions to adverse circumstances? Is it a matter of training?

(Continued on p 21.)



Photo R Krishnan

What explains the difference in people's reactions to adverse circumstances?

The Oriental Watchman and

Herald of Health

A Magazine for Home and Happiness

48th YEAR OF PUBLICATION

Postal Address: Post Office Box 35, Poona 1, India

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April 1957

L. J. LARSON, Editor

DUNBAR SMITH, M.D., D.N.B., D.T.M. & H. (LOND.) ASSOCIATE EDITOR

J. B. OLIVER, M.B., D.T.M. ASSOCIATE EDITOR

OUR COVER

Oft did I wonder why the setting sun
Should look upon us with a blushing face
Is't not for shame of what he hath seen done,
Whilst in our hemisphere he ran his face?
—Lyman Heath

Photo Vidyavrata

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Minute Meditations

SO YOU'RE SELF-CONSCIOUS

D. A. Delafield

YEARS ago the Los Angeles *Times* reported the story of a little boy who called at the home of a gentleman with some picture post cards that he was selling at ten cents apiece. "What are you going to do with the money?" the man asked. "I am raising one million dollars for earthquake relief," he answered earnestly. And he was so tiny and the amount he named was so large that the man had to laugh.

"Do you expect to raise it all by yourself?"

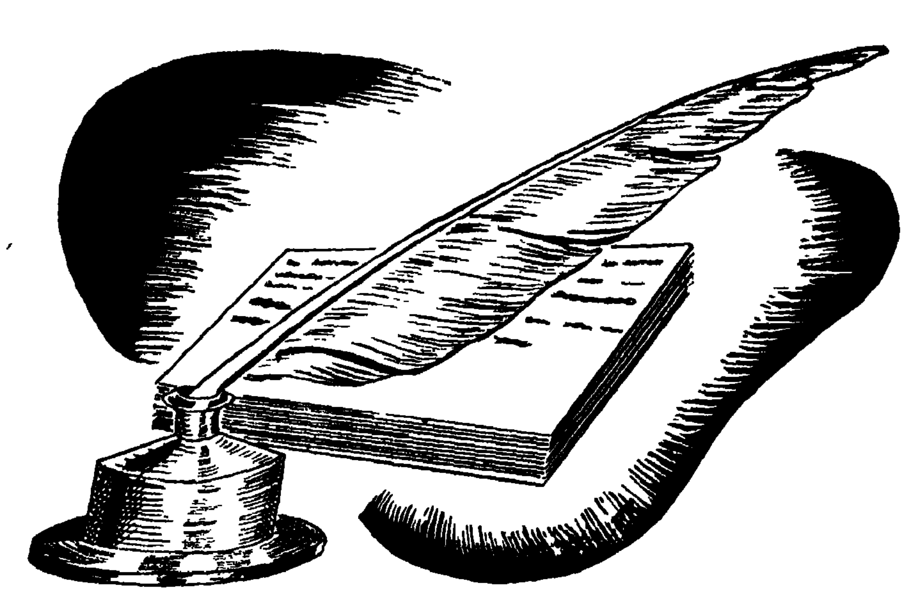
"No, sir," he replied gravely; "there is another little boy helping me."

We could all tell stories about children whose little minds are fresh with "wee wisdom" and whose big hearts are loaded with love. The ambitious little chap in my story had no doubts and he had faith. He and his pal were going to raise a million. The money wasn't for themselves either, but for others in desperate need. Best of all, they were certain of their money, though they never dreamed that they would have to sell ten million cards to get it.

This naivete is the clean, white glory of little children. How we admire their transparent innocence, self-forgetfulness, and the complete abandon to the love that prompts the action of the moment. This utter absence of self-consciousness is childhood's magic key—the open sesame to our adult hearts.

As people grow older they should not outgrow *that*. But we all do, in spite of the fact that our self-consciousness is as unneces-

(Continued on p. 5.)



THE EDITOR SAYS

"THE BATTLE OF THE GHEES"

SOME time ago we received a communication from one of our subscribers which we found interesting—amusing in fact, and we would have simply had a good chuckle over it and tossed it in the waste-paper basket had it not been for the very serious implications of some of the thoughts contained in it.

There has been for some time, in India at least, a good deal of agitation on the part of some with reference to "vegetable ghee" and the old traditional ghee derived from butter-fat. This conflict has reached alarming and ridiculous proportions at times and many of the allegations that are made against the vegetable products are most unreasonable.

For example, the communication referred to states that so far as the writer is concerned, his knowledge indicates that any kind of "*vanaspati* or vegetable ghee is definitely injurious to health." Quoting further from his communication, we read, "It affects the eyes and the users will become impotent." "Moreover by its continuous use man becomes prematurely old. His hair becomes gray." Then this writer courteously says, "If you do not agree with me, kindly advise through your magazine or else avoid such advertisements which are likely to mislead."

Inasmuch as we do not agree with this gentleman, and since we do refuse all advertising which we think might be either harmful to the public or misleading, we are hereby informing our reader that we do not agree with him and why we do not. Those who have read our magazine for a number of years have noted that throughout the years of our publication, which now number 48, we have not advocated very strongly the use of animal fats. We, of course, strongly advise against the use of pork fat, commonly called lard, and repeatedly, in the articles we have published, particularly in recent years, have urged that our readers use other animal fats sparingly. This is due mainly to the fact that modern research reveals that the use of animal fats tends to increase the cholesterol content in the system which is one of the factors which seem to be involved in the production of many of the cardiovascular disorders, such as high blood pressure, that are affecting modern men and women more and more.

The implications of the correspondence we have referred to earlier in this editorial are pathetic in the degree of ignorance that they reveal so far as true facts of the case are concerned. Millions upon millions of people all over the world make use of no fat other than that which is obtained from vegetables or nuts. They leave off entirely the use of any fats of any kind derived from animal sources, and they are perfectly healthy. In fact, usually they are healthier than those who use the animal products! Their reproductive systems are not interfered with. Their potency is not affected. Their old age is not brought on prematurely. They are just as healthy as those who use the animal products. And they are more free from diseases in wh cholesterol is a factor.

We fear that there is a bit bias, perhaps prejudice, that en into the "battle of the ghees" possibly also a bit of commer rivalry because of the fact that vegetable fats are often much m economical, so far as their cos the user is concerned. Certainly methods under which they generally produced are much m sanitary than are the conditi under which much of the ghee t is obtainable in the bazaar is p duced.

We have deliberately inqui concerning hydrogenated oils we would like to present to readers this month a little of information we have been abl obtain.

Those substances comm called *vanaspati* are really hyd genated oils which are prepared commercial use. Hydrogenated came into use in India betw thirty and forty years ago rapid has been the development this food industry that today hyd genated oils constitute the princi source of dietary fats in many p

the world. In India, as we have ted, hydrogenated oils are comonly known as *vanaspati*, though ey are sold, of course, under any different trade names.

Vanaspati is a semi-solid fat ade from pure vegetable oils hich have been in use in the untries of Southern Asia from cient times. The oil seeds are ushed to obtain the oil which is en thoroughly refined to remove impurities. The oil is next drogenated in order to turn it to a semi-solid fat. Finally, it is -odourized or freed from its eculiar odour. *Vanaspati* has a leasant aroma and taste and a ranular texture, all of which are generally appreciated by the consumers.

The question is often asked, why should the oil be hydrogenated? Hydrogenation turns the oil into a semi-solid fat and thus makes it an all-purpose cooking fat. Hydrogenation does not change the nutritive value of the oil but helps to keep it fresh longer. This is an mportant consideration in tropical countries where oil goes rancid quickly on account of the hot limate There is less likelihood of eakage or wasteage when the fat transported in a semi-solid form. lso it is recognized that the eculiar and highly individual avours of the different vegetable ls are liked by some but disliked y others. For example, it is well nown that a Malayalee may like do her cooking in coconut oil ut we recall a little girl from yderabad who was given some od that had been fried in coconut She said that she liked it very uch but she wished that they had t "cooked it in hair oil"! The alayalee, however, would probly not enjoy his food cooked in oundnut or mustard oil, while Bengali loves the mustard oil t not coconut oil. In other areas people commonly make use of groundnut oil. So it can be seen t tastes vary throughout the country where the natural untreated oils are used. Hydrogenation helps to overcome such local likes and dislikes and in this way *vanaspati* helps the fat resources of the country to be distributed on a more rational basis.

There are vast resources for vegetable oil in the tropical countries, whereas India, for example, which has an enormous population of cattle, has one of the lowest milk-fat production rates per cow of any country in the world. It should be made perfectly clear that if the people were to be deprived of the use of the vegetable oils, either in their natural state or in the purified and refined state as *vanaspati*, it would make the cost of their ghee prohibitive and at the same time would provide them with a less healthful substance.

It is true that people who are misinformed have questioned the nutritive value of *vanaspati*. The Government of India, realizing that misconceptions about food products should not be allowed to arise, appointed a body of well qualified scientists to report on the nutritive value of *vanaspati* They carried on detailed experiments and research on human beings and animals for a period of nearly three years. This work was done in a leading research institute of India and the scientists have unanimously confirmed to the Government that *vanaspati* is a wholesome food. These findings of the scientists were disclosed by Shri Jayaramdas Daulataram, the then Minister for Food and Agriculture, before the Parliament in December, 1949. "The results indicate that there is no deleterious effect produced by *vanaspati* as compared with raw or refined oil."

Some of the correspondence we receive and some of the items we read in the press would lead us to believe that some think that hydrogenated oils are peculier to India. This is not so *Vanaspati* has been considered a valuable article of diet according to scientific and medical opinion throughout the world. In the form of margarine and hydrogenated shortenings it is consumed extensively in Europe, America, and other parts of the world.

(Continued on p. 28.)

So You're Self-conscious

(Continued from p. 3.)

sary and as uncomfortable as the measles. Whenever this rash breaks out it is symptomatic of inner conflicts. Self-conscious people are frequently timid and self-centred. The knowledge of their shortcomings and failures weakens their confidence in themselves. They are nervous, easily offended, and embarrassed. They are not deliberately selfish, but they need to choose a nobler subject than themselves for their affections and thoughts. There should be a conversion to a new centre of worship. We recommend Jesus. His life, His miracles, may be read in the Gospels of Matthew, Mark, Luke and John. A thoughtful half hour spent every day in reading the New Testament will bring assurance and release to captive minds.

"Except ye be converted, and become as little children, ye shall not enter into the kingdom of heaven." Spiritual re-birth is the key to glory. The elements in this key are simplicity, trustfulness, and total self-forgetfulness. The gentleness of the child can make you great. But "ye must be born again." Such blessed conversion to the Centre of life will open the door to freedom and lasting peace.

THE STUDENTS' GUIDE

RULES FOR EDUCATIONAL SUCCESS

Suggestions by a Foreign Student Adviser

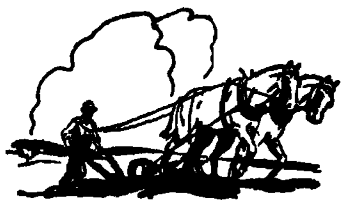
Many of the young people from Southern Asia are now studying abroad. Many of these are studying in the United States of America. One of America's educators, advises the student who would succeed in his studies in America.

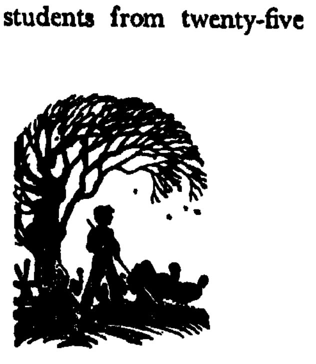
BEFORE a foreign student can expect to gain the greatest benefit from a visit to the United States, he should make sure that he knows as much as possible about his own country.

That is the counsel of William Kirkpatrick, co-ordinator for foreign students at California State Polytechnic College, a 3,000-acre ranch-style school at San Luis Obispo, half way between Los Angeles and San Francisco. Both Kirkpatrick and California "Poly" have had long and frequent contacts with students from other lands. The college is famous for its learn-by-doing methods and has enrolled students from over forty countries.

Mr. Kirkpatrick, who has spent tours of duty in Thailand, Indonesia and Malaya, has supervised the campus activities of some 125 foreign students from twenty-five different countries. He believes that more and more, students from overseas will look to the United States in their quest to overcome the technical lags in their own countries. *And he believes strongly that they should be aware of the weaknesses they seek to overcome.*

"One of the basic requirements for a foreign student to have in order to attain the maximum benefits from his education in the United States or elsewhere, is a thorough understanding of the limitations, re-





sources, potentialities and problems of his own country," Kirkpatrick says. "A student wanting to study agriculture in the United States should have a good first-hand knowledge of the rural areas of his own country. He can then evaluate and relate his educational experiences abroad to prepare himself to face the practical and sometimes really simple problems in his country.

"A student without awareness of the problems he will face in his chosen profession when he returns home, too often becomes frustrated, looks elsewhere for something else to do, and in effect discounts and wastes his education."

Another key to obtaining the most from an education in the United States is a real appreciation by the student that it is no disgrace to do things with his own hands, says the California Polytechnic student adviser.

"A student who realises the dignity of labour, even in his own country, generally gets a great deal



out of his training abroad," he maintains. "Practical knowledge gained by 'doing-experiences' is the vital need in the world not only of *today but of tomorrow. Little is learned by listening and seeing. Development of the ability to demonstrate is the mark of an* educated man, as we see it here in America."

Selection of candidates for study in the United States should necessarily be limited to those with a working knowledge of English, he believes.

"Far too often," he points out, "a foreign student in the United States wastes many valuable months after he arrives attempting to master English rather than pursuing his technical education

"And it has proved out that the candidate who, in his own country will seek out the English-speaking people in order to further his language ability, shows traits that generally lead to success not only in his studies abroad but in using the fruit of those studies on his return to his home.

"The foreign student studying in



e United States should also be pable of being independent," ys Kirkpatrick. "To gain the ost from his study programme, should have sufficient reliance d initiative to execute a plan of ing with American students. The ceptance of a foreign student by nerican students is based on the dividual and his action—not on s race, creed, social, political, or ancial position in his own untry. Taking part in student tivities on a campus may at first em difficult, but the assets to be ined are certainly worth the fort," Kirkpatrick says.

The educator urges that in hoosing a college in the United tates, much consideration be given o the smaller colleges.

"If possible, select a college whose faculty specialises in the student's greatest field of interest and whose members are acquainted with the student's part of the world and its problems.

"All students, whether from abroad or from the United States itself, should be truly aware that an educated man is not one whose memory is trained to carry facts and dates, but one who can accomplish things."

He urges particularly that foreign students not regard the U S. educational system as a "sure cure" for ignorance and mediocrity.

Finally, he says that the test of education is its ability to make its possessor think for himself.

"An individual who has not earned to think is not educated by our scale over here, no matter how many college degrees he may have acquired," Kirkpatrick says.



DIGNITY OF LABOUR

Ellen G. White

THE youth need to be taught that life means earnest work, responsibility, care-taking. They need a training that will make them practical—men and women who can cope with emergencies. They should be taught that the discipline of systematic, well-regulated labour is essential, not only as a safeguard against the vicissitudes of life, but as an aid to all-round development.

Notwithstanding all that has been said and written concerning the dignity of labour, the feeling prevails that it is degrading. Young men are anxious to become teachers, clerks, merchants, physicians, lawyers, or to occupy some other position that does not require physical toil. Young women shun housework, and seek an education in other lines. These need to learn that no man or woman is degraded by honest toil. That which degrades is idleness and selfish dependence. Idleness fosters self-indulgence, and the result is a life empty and barren—a field inviting the growth of every evil. . . .

Manual training is deserving of far more attention than it has received. Schools should be established that, in addition to the highest mental and moral culture, shall provide the best possible facilities for physical development and industrial training. Instruction should be given in agriculture, manufactures—covering as many as possible of the most useful trades—also in household economy, healthful cookery, sewing, hygienic dressmaking, the treatment of the sick, and kindred lines. Gardens, workshops, and treatment-rooms should be provided, and the work in every line should be under the direction of skilled instructors.

The work should have a definite aim, and should be thorough. While every person needs some knowledge of different handicrafts, it is indispensable that he become proficient in at least one. Every youth, on leaving school, should have acquired a knowledge of some trade or occupation by which, if need be, he may earn a livelihood.

ONE autumn Mr. Brown went hunting. The next day the skin on his arms and face began to itch. It soon became red, greatly swollen, and covered with blisters. He had a case of poison Ivy dermatitis, contracted when his sensitized skin touched the leaves of *Rhus toxicodendron,* or poison ivy plant. Poison ivy dermatitis is an example of skin inflammation caused by contact with something outside the body. It happens only to persons who have been previously sensitized. The first exposures to ivy may be made weeks or months before, and cause no inflammation. But they do cause a change to take place in the victim's skin. Upon the next exposure the skin is inflamed and swells painfully.

The number of irritants that can cause contact dermatitis are almost without number. There is scarcely anything that human skin touches that may not sensitize and finally irritate some persons. Weeds, grasses, certain plants, paints, varnishes, oils, dyes, woods, metals, chemicals, plastics, and lime are a few common irritants.

Friction, the removal of the natural skin oil by various solvents or too much soap and water may favour sensitization. Gloves and ointments are sometimes used to protect the skin.

Contact dermatitis is a superficial inflammation of the skin. In the acute stages there is redness, oozing, and blisters.

When the cause is known, the malady is called dermatitis; when not known it is often called eczema. The pathologist often is at a loss because the symptoms are confusing

In both conditions the skin may be congested and microscopic blisters may form among the cells. These tiny vesicles coalesce, and the droplets of serum push the skin cells apart. This microscopic displacement causes itching. Blisters appear on the skin, and yellow serum seeps out and dries into honey-coloured crusts. Bacteria complicates the situation by causing infection.

Dermatitis and eczema have many stages, and the skin may pass through all in succession. It may remain for a time in the stage of congestion, with redness, blistering, and weeping, or a dryness, with thickened tissues and scaliness.

Skin inflammation in general has innumerable causes, but it may be classified into non-sensitization dermatitis and sensitization dermatitis. Under the first heading are inflammations caused by mechanical, chemical, or physical injuries, and eczema caused by varicose veins Under the second heading are inflammations that result from sensitivity to substances outside or inside the body.

In treating skin irritations it is best to use the mildest and simplest remedies Dermatitis may easily be over-treated In the acute stages compresses of ice-cold boric-acid solution are soothing, and relieve congestion. When the trouble is not acute, zinc-oxide pastes are used, and when it is chronic, tar may be used.

The thousand and one home treatments generally irritate the skin and make matters worse by adding new sensitivities. When little Betty sneaked into the pantry and gorged herself on fresh strawberries, in a little while to her dismay her skin began to itch and burn. Wheals with white tops came up wherever she rubbed or scratched. Poor Betty had hives. The doctor gave her castor oil to take and a cooling lotion for her skin.

In a day or two Betty was all right, but she must beware of strawberries, for she is sensitive to them. When strawberry proteins carried in her blood reach the *cells in the tiny vessels deep in her skin, these cells react violently. Serum leaks out and her skin swells up and itches. A previous gorging*

EXQUISITE SENSITIVITIES

● Wine taken in religious ceremonies by a young Boston clergyman proved to be the one and only cause of hay fever, bronchial asthma, and hives.

● "Inhalation of steam arising from boiling corn" and corn on the cob caused asthma in a 37-year-old woman.

● A Philadelphia newspaper reporter for twenty years was forced to give up his job when an allergist found that his asthma was due to fresh newsprint.

● When a diabetic patient, after six years, changed from using insulin of pork origin to insulin of beef origin, chronic stomach cramps disappeared.

● In a woman put on a bland diet for a case of ulcers, symptoms were found to be from the eggs she was directed to eat.

● "After a long search, tooth paste was found to be the offending agent" of attacks of itching, swelling, and blister formation on the left hand of a 46-year-old woman The doctor discovered that "at least once a week she thoroughly cleaned her false teeth by gripping them in the palm of her left hand"

Skin Allergy

ROBERT P. LITTLE, M.D.

l sensitized Betty, for so much ıwberry got into her blood that skin could not tolerate it.

Nearly everyone suffers from rs at some time in his life. It is orm of blood vessel allergy to ds, drugs, or bacteria.

There is a kind of deep-skin al-;y that somewhat resembles hives that the shock organ is in the od vessels at another level. It ers from hives in that the skin s not break out in welts or :als. Instead, the skin becomes kened and covered with fine 's. There is always itching, so t the skin is covered with ıtches, scabs, and crusts. This ı disease is called atopic eczema, ıetimes neurodermatitis disseminata. Flexural eczema affects only the jointed surfaces.

Bobby Brown, aged eight, had an eruption on the back of his knees, the front of his elbows, the back of his wrists, and the outside of his thighs—and did it itch! Bobby scratched it a great deal.

Dr. White said that Bobby was atopic. In other words, he had an inherited tendency to react allergically. Bobby's father had asthma, an aunt suffered from hay fever and Bobby himself had had eczema when he was a baby. Now his skin reacted to blood-borne allergens, very likely from foods.

Dr. White said that such eczema was difficult to treat. Skin testing is of little value, although elimination diets occasionally are helpful. Since Bobby's general health is more important than his skin, caution was needed in applying diets. Fortunately this eczema is often outgrown. Friction aggravates this type of eczema. There is always friction at the bend of the knees and elbows, and where the clothes rub the back of the neck, the wrists, and the outside of the thighs. The eruption appears in these locations.

Dr. White advised: "The thing to do, Mrs. Brown, is to let only soft cotton touch Bobby's skin. No wool, silk, or corduroy coats and trousers for Bobby Brown. Only the softest cotton should touch his skin. If he wears wool, it should be lined with cotton. He should wear soft cotton underwear. Sometimes I order a woman's cotton stocking with the foot cut off to protect the arms and legs. I shall prescribe a bland zinc plaster to soothe the skin. Remember, Bobby, no scratching

"Patients with this eczema always rub and scratch. I am sure, Mrs. Brown, you have observed how Bobby rubs his leg with his other knee and how he scratches against the chair. This habit makes atopic eczema hard to treat.

"The shock organ in atopic eczema lies in the blood vessels, just as it does hives. In atopic eczema it is the cells lining the capillary loops that are affected. These vessels are so very tiny that we don't see wheals and welts, but the skin thickens and itchy bumps form."

Anyone can be affected by contact dermatitis and hives, but atopic eczema is found only in those who inherit an allergy tendency. Often the sufferer has hay fever and asthma too. Strange to say, the asthma and the dermatitis may alternate so that when the skin is better the asthma becomes worse, and *vice versa*.

See your physician for treatment of atopic eczema.

DIET AND HEALTH

(Second of Two Parts)

Ellen G. White

MANY who discard flesh-meats and other gross and injurious articles think that because their food is simple and wholesome they may indulge appetite without restraint, and they eat to excess, sometimes to gluttony. This is an error. The digestive organs should not be burdened with a quantity or quality of food which it will tax the system to appropriate.

Custom has decreed that the food shall be placed upon the table in courses Not knowing what is coming next, one may eat a sufficiency of food which perhaps is not the best suited to him. When the last course is brought on, he often ventures to over-step the bounds, and take the tempting dessert, which, however, proves anything but good for him. If all the food intended for a meal is placed on the table at the beginning, one has opportunity to make the best choice.

Sometimes the result of over-eating is felt at once. In other cases there is no sensation of pain; but the digestive organs lose their vital force, and the foundation of physical strength is undermined.

The surplus food burdens the system, and produces morbid, feverish conditions. It calls an undue amount of blood to the stomach, causing the limbs and extremities to chill quickly. It lays a heavy tax on the digestive organs, and when these organs have accomplished their task, there is a feeling of faintness or languor. Some who are continually over-eating call this all-gone feeling hunger; but it is caused by the over-worked condition of the digestive organs. At times there is numbness of the brain, with disinclination to mental or physical effort.

These unpleasant symptoms are felt because nature has accomplished her work at an unnecessary outlay of vital force, and is thoroughly exhausted. The stomach is saying, "Give me rest." But with many the faintness is interpreted as a demand for more food; so instead of giving the stomach rest, another burden is placed upon it. As a consequence the digestive organs are often worn out when they should be capable of doing good work.

A clogged stomach means a clogged brain. The most precious words may be heard and not appreciated, because the mind is confused by an improper diet.

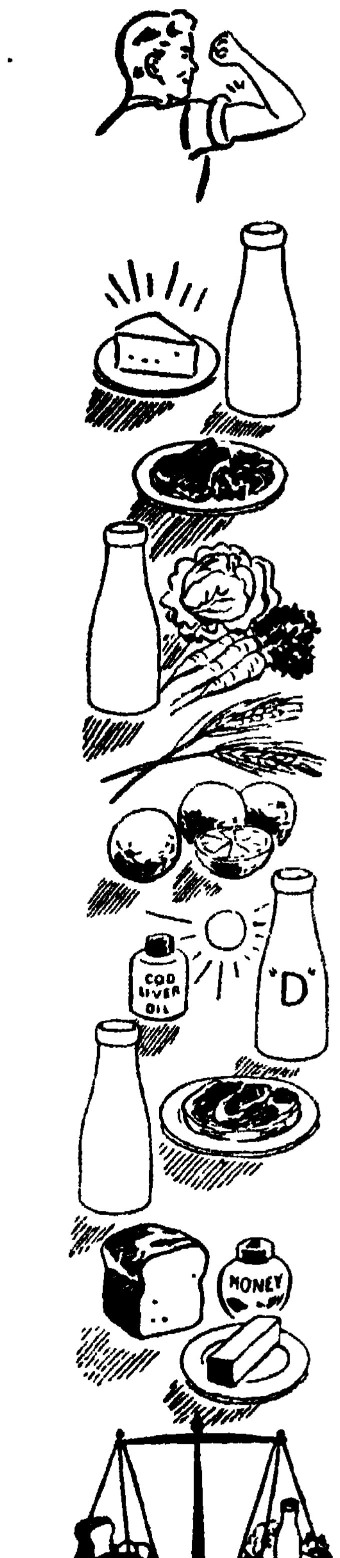
Where wrong habits of diet have been indulged, there should be no delay in reform. When dyspepsia has resulted from abuse of the stomach, efforts should be made carefully to preserve the remaining strength of the vital forces, by removing every over-taxing burden. The stomach may never entirely recover health after long abuse; but a proper course of diet v save further debility, and ma will recover more or less fully. I not easy to prescribe rules that v meet every case; but with attent to right principles in eating, gr reforms may be made, and cook need not be continually t ing to tempt the appetite.

Abstemiousness in diet rewarded with mental and mo vigour; it also aids in the cont of the passions. Over-eating especially harmful to those w are sluggish in temperament; th should eat sparingly, and t plenty of physical exercise. Th are men and women of excell natural ability who do not complish half what they might they would exercise self-control the denial of appetite.

Many writers and speakers here. After eating heartily, t give themselves to sedentary

cupations, reading, study, or writing, allowing no time for physical exercise. As a consequence the free flow of thought and words is checked. They cannot write or speak with the force and intensity necessary in order to reach the heart; their efforts are tame and fruitless.





Those upon whom rest important responsibilities, those, above all, who are guardians of spiritual interests, should be men of keen feeling and quick perception. More than others, they need to be temperate in eating. Rich and luxurious food should have no place upon their tables.

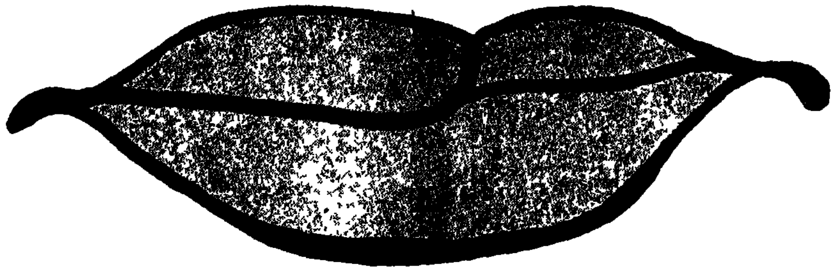
Every day men in positions of trust have decisions to make upon which depend results of great importance. Often they have to think rapidly, and this can be done successfully by those only who practise strict temperance. The mind strengthens under the correct treatment of the physical and mental powers. If the strain is not too great, new vigour comes with every taxation. But often the work of those who have important plans to consider and important decisions to make is affected for evil by the results of improper diet. A disordered stomach produces a disordered, uncertain state of mind. Often it causes irritability, harshness, or injustice. Many a plan that would have been a blessing to the world has been set aside, many unjust, oppressive, even cruel measures have been carried, as the result of diseased conditions due to wrong habits of eating.

Here is a suggestion for all whose work is sedentary or chiefly mental; let those who have sufficient moral courage and self-control try it: At each meal take only two or three kinds of simple food, and eat no more than is required to satisfy hunger. Take active exercise every day, and see if you do not receive benefit.

Strong men who are engaged in active physical labour are not compelled to be as careful as to the quantity or quality of their food as are persons of sedentary habits; but even these would have better health if they would practise self-control in eating and drinking.

Some wish that an exact rule could be prescribed for their diet. They over-eat, and then regret it, and so they keep thinking about what they eat and drink. This is not as it should be. One person can not lay down an exact rule for another. Every one should exercise reason and self-control and should act from principle.

Our bodies are Christ's purchased possession, and we are not at liberty to do with them as we please. All who understand the laws of health should realize their obligation to obey these laws, which God has established in their being. Obedience to the laws of health is to be made a matter of personal duty. We ourselves must suffer the results of violated law. We must individually answer to God for our habits and practises. Therefore the question with us is not, "What is the world's practice?" but, "How shall I as an individual treat the habitation that God has given me?"



Cleft Palate and Speech

W. FLETCHER TARR

CLEFT palate is not new or modern. The defect has been seen in the skulls of Egyptian mummies. Scientists have been unable to determine the cause of this deformity of face and mouth. Until they do, we must proceed with our efforts to alleviate it by means of surgery, dental devices, and speech therapy.

Cleft palate and cleft lip result from a failure of the two sides of the upper jaw to unite at the midline. This normally takes place between the sixth and eleventh weeks after conception. The embryo is then about an inch long. When the bones do not unite, an opening is left between the mouth and nasal cavity, sometimes extending back far enough to include the soft palate, and nearly always leaving a deficiency in the upper lip.

The incidence of cleft palate is one in about nine hundred births. There is some evidence that a heredity factor is involved, yet many cleft palates occur in families with no histories of cleft palate. It also seems to occur more frequently in families having mixed racial lines.

In recent years social enlightenment and scientific advancement have brought the cleft palate child a hopeful outcome. As a result of surgery, tooth straightening, and speech correction such a child can expect good results. The child so afflicted often has eyes more beautiful than the average, a pleasing disposition, and above-average intelligence. All efforts on his behalf will be amply rewarded with eventual satisfaction greater than one can anticipate.

Specialists differ in opinion regarding procedure for surgical repair of the lip and palate, but most agree that the lip should receive first attention. It is best operated when the child weighs between nine and ten pounds. Early closure aids in the infant's feeding, gives more opportunity for good growth of the lip and muscles of the mouth, and helps to draw together the two separated parts of the jaw.

If the cleft includes the soft palate, some surgeons will repair that when the patient is about eleven months old. Because of the nature and function of the muscles of the head and face, this operation also has the effect of narrowing the opening in the palate. The repair of the cleft in the palate is generally left until the ages of two to six, depending on the growth and health of the child and the surgeon's technique.

What is done about the opening in the palate until time for surgery? Many physicians recommend an obturator. This is an appliance made for the individual child by a dentist who specializes in making dental substitutes. It is so fashioned that it fits into the opening of the jaw bone. It helps to prevent the escape of air through the nose during speech. This device can be removed for cleaning and is easily replaced. In some cases where surgical repair is considered inadvisable, or in adult cases whose repair under old methods was faulty, the obturator may be retained permanently. In the case of a child it must be exchanged from time to time to conform to the growth of the mouth.

Until the turn of the century comparatively little attention was given to procedures specifically enabling the person to speak well. Most concern was for the child's ability to eat and drink. It has been realized that speech, preparation for social life, and cosmetic effect are as important as eating. Speech is vital to personality development and social enjoyment.

Parents have a great responsibility. The child whose lip closure is inefficient or whose speech quality gives evidence of cleft palate will be accepted by his own family and intimate friends. But as his world enlarges and he comes in contact with others, he will begin to discover that he is different. Children are often inconsiderate of the feelings of others, sometimes to the extent of being cruel.

When this happens, the parents tend to assume an over-protective attitude. Instead, they should orient the child to the realization that he has an additional challenge to meet, and that he can meet it. If they adopt the right attitude, what would otherwise be a serious handicap can become an asset in personality development.

I have among my current cases a number of children with severe cleft palate who are not only accepted by their peers but who outshine them in personality and other attributes Over-protection could easily have led them to the belief that they were different and inferior, that they should retreat from society.



S. Satyan

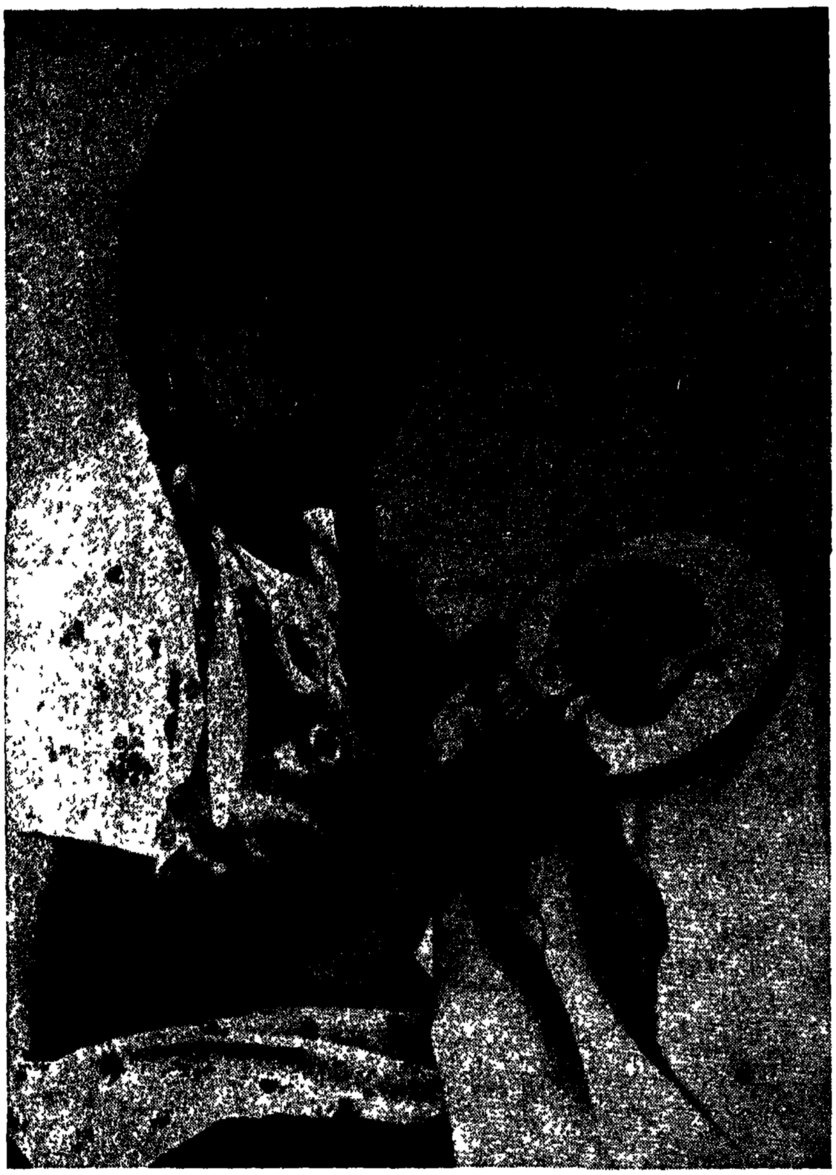
Instead of being over-protective, the parents should orient the deformed child to the realization that he has an additional challenge to meet, and that he can meet it.

There are degrees of severity in cleft, and any such condition may be accompanied by other anomalies, such as malformed teeth and defective hearing. Although the hope for speech may seem slight, of all serious defects involving speech, the cleft-palate child has the greatest chance of speaking normally. When the child begins to talk, therapy should begin in the home, with exercises for the the upper lip to help the child in the formation of the M, P, and B sounds. At the same time, consultation with the speech therapist, he should have exercises to develop the mobility of the soft palate so as to prevent the escape of air through the nose and for the formation of the K and G sounds. Malformation of the gum ridge or lack of flexibility of the tongue may interfere with T and S. The child should be taught the correct sounds and also to know the difference between them and the ones he produces.

The aim of therapy should not be perfection. The goal should be speech that approximates the normal. It should not be expected in a few months or even a few years. With a great deal of patience and encouragement from parents and therapist, and with conscientious effort by the child, there is every reason to believe that he will be able to lead a normal life.

A young man of my acquaintance, born with a severe bilateral cleft of both palate and lip, finished high school as president and valedictorian of his class and is now studying for the ministry. A young woman with a similar defect and with a similar determination to advance, became so enthusiastic over her achievement in speech that she is now in a university preparing to become a speech therapist.

These are by no means exceptional people. Given adequate surgical care, speech therapy, and psychological preparation, the child with a cleft lip or palate has an excellent chance of success.



Photo· N Ramakrishna

Girls doing embroidery work may complain of eye-strain even when there is no need for glasses, nor is there any eye disease or organic disease.

Eyes, Ears and Efficiency

DR. SHANTILAL N. AMIN

YOU have only one pair of eyes and one pair of ears. They are your organs of perception. They are your priceless possessions. They will serve you as long as you live if you take good care of them.

The Eyes

The most sensitive part of your body are the eyes. Foreign bodies hurt your eyes when they accidentally come in contact with the cornea or the white membrane of your eyes. If not treated, your injured eyes (however slight the injuries might be) might be permanently damaged.

Many persons become blind from accidental injuries that could have been prevented if proper precautions had been taken when doing jobs that involve such accidents.

Children at play are likely to meet with such accidents. It is the duty of their guardians or parents to see to it that the children do no play with such articles as may cause injury to their eyes and ears

Turners, fitters, drillers, welder and other skilled workers and thei assistants can well protect thei eyes by wearing suitable glasses o goggles.

Your eyes and your ears will serve you for a lifetime, if you take good care of them.

Persons attending cinema shows seldom realize that they injure their eyes. This, probably, is one reason why wise parents do not allow their children to abuse their eyesight by visiting cinema shows very frequently!

The eyes can give their service with the maximum efficiency only when the area of their activities is adequately illuminated. In other words, there should be adequate light in the place you work. Either too strong or too weak rays of light may injure your eyes. Never try to read or write in the strong glare of the sun. Glare is harmful to the sensitive mechanism of your eyes. Therefore, indirect light is the best for the eyes. A fluorescent light or a petromax light cannot damage the eyes but it can produce discomfort.

In good light, some persons complain of eye-strain even when there is no need for glasses, nor is there any eye disease or organic disease. Clerks, students and girls doing embroidery work belong to this class. Rest and change of hobby and occupation relieves the eye-strain.

If anything is wrong with your eyes, at once go to an eye specialist who is a competent opthalmic physician, and have him examine and treat your eyes.

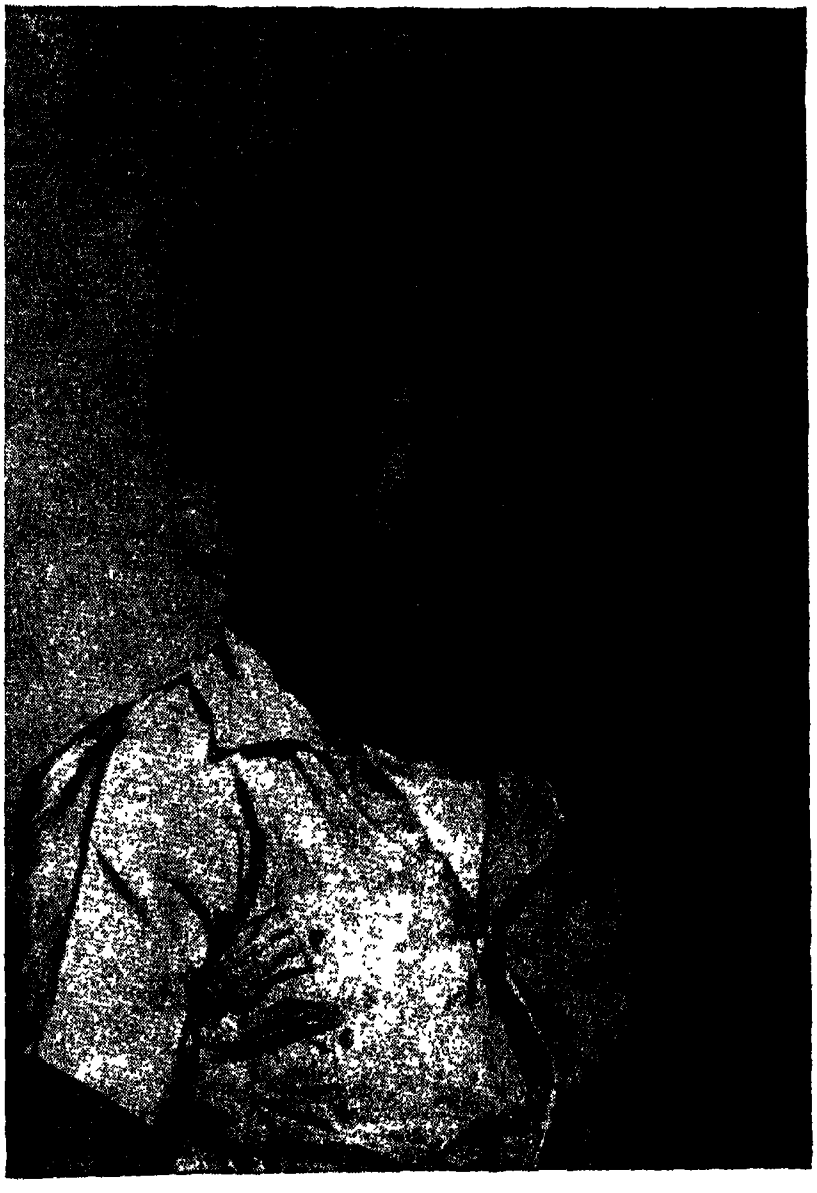
If you are near-sighted (myopic) or far-sighted (hypermetropic), you should have your eyes tested by a duly qualified doctor. There are many eye clinics in the Government Civil Hospitals in the country where people are tested for their eye troubles free of charge. You should never go to quacks. Wrong numbers of the glasses will give you defective vision. Similarly, drugs advertized by the layman or lay profession, may do more harm than good to your eyes.

If your eyes are swollen and red and if they are watering unusually then you should have expert help immediately.

If you have albumin in your urine, you should never take injections of arsenic; if you do, you may permanently lose your eyesight, because arsenic administered during the presence of an organic disease of the kidney, etc., may injure the optic nerve. Similarly, a person suffering from diabetes is likely to lose his vision if he is not treated for a long time. If you have the slightest suspicion that you are suffering from these diseases you should have your urine tested.

In tropical countries, many children are seen with diseased eyes. Flies alighting on the eyes of these children carry disease germs

(Continued on p. 25.)



Photo· G. Ramamurthy
If you suspect that your child cannot hear properly, try to find out whether he has recently been given an overdose of quinine.

WHEN I was a boy the entire family always spoke of poor Aunt Miriam's death as having been caused by ptomaine poisoning. In answer to my question as to the meaning of the term, my parents told me something about "food decay, which created noxious chemicals." This explanation, of course, I could not understand; nor have physicians understood it with the passing of time. What probably shuffled Aunt Miriam off this mortal soil was a germ known as *staphylococcus aureus* or one of its relatives.

Today's nutrition experts know that some of the most shabby appearing foodstuffs may be entirely healthful and non-poisonous. Without doubt some foods *are* poisonous by their very nature or because of unfortunate additives. Certain so-called culinary delicacies such as rattlesnake meat have an unsavoury reputation because they may be exposed to bacterial contamination or be preserved inadequately. About the most fallacious judge of "safe" foodstuffs is our palate, which is unable to distinguish toadstools from edible mushrooms or to detect the dastardly bacteria of the outstanding food poison that causes botulism.

Nutrition laboratories have irrefutably determined that certain foods harbour poisonous compounds, even when fresh Examples are several kinds of fish, certain shellfish, and some mushrooms. Adulteration of foodstuffs with harmful substances has been less in countries which have laws such as the American Food, Drugs, and Cosmetic Act. Nevertheless, as the expression goes, accidents will happen. Thus from time to time—especially in institutions—a common insecticide used in kitchens, containing deadly sodium fluoride is sometimes mistaken for flour or baking powder.

It is amazing how wholesale the results may be. At a Western mental hospital, after the mixing of seventeen pounds of sodium flouride (instead of powdered milk) with a ten gallon mixture of scrambled eggs, 263 inmates were made ill and 47 died. It is much wiser and safer to keep poisonous insecticides out of the pantry, even though the containers are suitably labelled.

It is a far cry from the farm to the table, but instances of food (*sic*) poisoning because of insecticidal sprays are not rare. Favourite ingredients of such sprays are arsenic and lead salts How lasting these evil elements are is best illustrated by the unhappy experience of a manufacturer of apple powder used for diarrhœa of infants. The finest apples were purchased, washed meticulously under forced pressure, ground, dried, and tested for heavy metals The content was well above limits allowed by law, and the manufacturer had the very same experience with a second batch! A horrible accident was involved. How many cases of mild attacks of neuritis (inflammation of the nerves) and muscular twitching follow poisoning after the eating of unpeeled fruit? Careful washing of fruit is not always enough to ensure safety.

There are many other ways in which lead can get into food Flakes of lead paint, glazes, enamels, alloys and solders containing lead get into the food through the use of these products in food-packing machinery and containers. In a certain bakery an oven fire was started with a piece of old wood from a boat painted with lead paint, and thirty-seven cases



Photo· Press Photo

Food poisoning still occurs despite tremendous scientific advances in handling—legal control, canning, refrigeration, and sanitation. By food poisoning we mean non-bacterial poisoning.

Food Poisoning

JAMES A. BRUSSEL, M.D.

By what means do foods change and become poisonous and dangerous to the human body?

of lead poisoning resulted. Lead vapour had condensed on the bread!

Two or three decades ago our common tin can was not without threat to our welfare. Today's steel, 'uminium, copper, and nickel ntainers and cooking utensils ive gone far in removing that izard. Now and then during the nning season the housewife who oks around for a huge cooking ssel may seize upon a galvanized on washtub or bucket—to her rrow, because of zinc and lead.

This is a good spot to clear up e whole idea of ptomaine poison- g. Says Dr. M. J. Rosenau, the itrition authority: "Ptomaine isoning is a myth—there is no ch thing." Dietary indiscretions, stro-intestinal infections or up- s, fatigue, chilling, allergic re- tions, and neurotic reactions have been so labelled, erroneously— en instances of oxalic acid poison- g. Oxalic acid poisoning has sulted from the drinking of fluid in which rhubarb leaves were cooked.

As an intern many years ago, I recall a similar epidemic from the making of soup out of *szchav,* a spinach-like plant popular with Slavic people. The event occurred in a restaurant patronized by emigrants from Middle Europe. Food inspectors found that the leaves were scrupulously washed and the washings rejected. The leaves were soaked in cold water overnight and boiled for a quarter of an hour. The extract was poured off and discarded. A second boiling of the leaves had egg and cream added, and the entire dish was served as sour-grass soup. Chemical analysis of this gourmet's delight showed ten grains of oxalic acid per pint of soup!

Other chemicals have figured in so-called ptomaine poisoning. World War I had outbreaks of diarrhœa in various Army camps that were due to saltpetre used in preparing corned beef. Tartar emetic produced a similar epidemic at the same time in Chicago hotels where under-tipped waiters added this chemical to foods served guests who were stingy with gratuities.

Civilized daintiness has accounted for some food poisoning. It seems that the American palate is more easily attracted to bread when it is the "snowy white" variety. A hundred years ago unscrupulous bakers whitened inferior flour with alum and magnesium carbonate. Less than ten years ago nitrogen trichloride was used to whiten bread. The practice was not abandoned until Sir Edward Mellanby, the nutrition expert, clinically proved with dogs that this chemical produced convulsions not unlike epilepsy! Today in many lands flour bleaching is closely scrutinized by the Government. Bread may include other poisons such as wheat ergot (common in Europe and rare in the United States).

Poisonous milk is practically unheard of, thanks to strict laws, but in areas where cattle may graze on certain poisonous plants, outbreaks of diarrhœa and gastro-enteritis are not unknown.

It was the philosopher Seneca who dubbed mushrooms voluptuous poisons No matter how much scientific-supervision is employed, mushroom poisoning crops up occasionally, chiefly because of the ignorance of the gatherer Mushrooms yield two well known toxic substances, phallin and muscarine. These can give rise to extreme abdominal symptoms, and go on to involve the heart, kidneys, liver, and central nervous system. The patient usually recovers, but fatal results are not unknown.

The sea is rich with marine life whose eating is fatal to man. Among the poisonous fish are the puffer, parrot and toad fish, Hawaiian mukimuki, and some mussels. Mussels obtain the poison by feeding on infected plankton. Incidentally,

(Continued on p. 32.)

Motherhood—Your Crowning Glory

BEULAH S. FRANCE

REMEMBER what a beautiful bride you were? You had the man of your choice nd as you pictured your lives hrough the years the future's rosy low lighted up your face. Now ou have your husband plus your weet, wonderful baby. There are hree of you to enjoy a thrilling uture.

The beauty of motherhood is ulfilment. The cycle of love is omplete. The bride of yesterday iolds the fulfilment of the promise f marital joy close—close in her rms as she happily gazes on the aby whom no one else could have rought into being—no one but he and the man of her choice. Aotherhood is a woman's crownig glory.

Does that thought light up your ace? Look in the mirror and see. ook before you read another rord. Catch yourself quickly off uard. Face your face and figure rankly. What do you see?

Has the radiance of a few ionths ago been replaced by a reary, worn, and possibly peevish xpression? Does your hair or your gure look a bit neglected? If you s a mother do not compare well

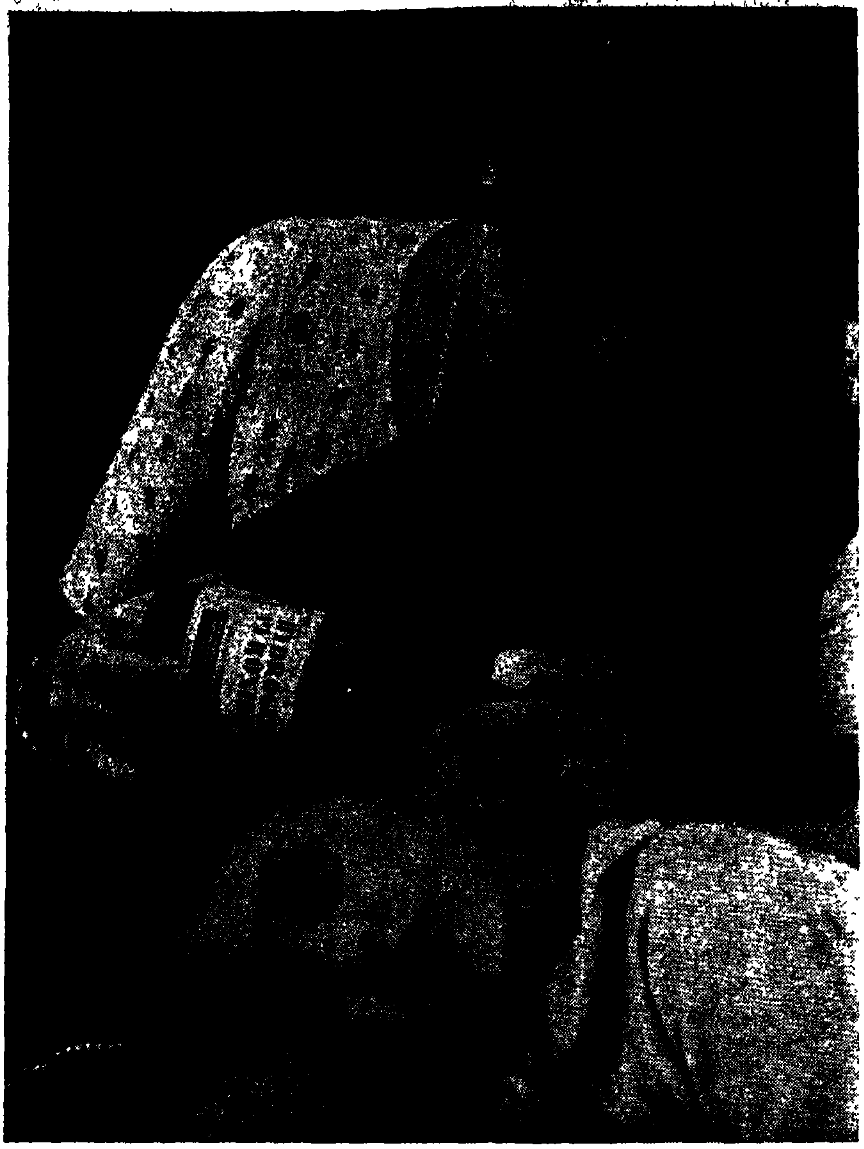


Photo N Ramakrishna

Motherhood is a woman's crowning glory.

with you as a bride, what is wrong? What happened? Must this letdown take place?

There are some young mothers who stay well groomed, cheerful, patient, and gracious women, still delightful to talk to, though carrying all their household duties, which are certain to be irksome at times.

A common pitfall of mothers is a temptation to talk only, always, and endlessly about their child or their children. To be delightful to talk to, you must think of others' interests. You must keep in mind that they do not share your passionate concern for your baby. When young mothers forget this fact they often become boring. Think back over your recent social contacts. Have you been an interesting conversationalist? If motherhood is to be your crowning glory, you must remain a vital, alert woman with many interests your home and baby.

," we hear you protest as ands replace straying locks ·, "any mother who stays ou call well groomed and a onversationalist can't have much else to think of. She probably has a servant for the housework and a nursemaid for the baby."

Being a good wife and mother is a truly character-building business for a woman.

However, this is not so. With neither of these aids, and even with a demanding baby, a mother can become well adjusted by developing an inward feeling of calm. One isn't born with self-control. Such an attribute calls for constant cultivation. A stubborn determination to be calm and a will power that won't allow the luxury of self-pity are aims every mother should hold up for herself.

Although at first it may be difficult to meet the challenge of new motherhood without becoming upset, the more you practise self-control the easier it becomes Emotional control, like muscle control, improves and grows stronger with use. Every time it is discarded, it is weakened. When you let yourself go it is harder to regain a grip on yourself.



Ramakrishna

Is your sleep disturbed every night by the baby?

Make up your mind this moment that just as your infant shall never be neglected, neither shall his mother ever be neglected. For your husband's sake, for your own sake, and for the sake of your small son or daughter, decide today to reclaim any beauty you have lost, and not only retain it but add to it Pledge yourself to the task of making motherhood your crowning glory.

No beauty parlour can replace inner poise and outward self-control These cannot be purchased. Having them, a young mother can stay calm, cheerful, and beautiful. Though she smilingly admits, "It's not easy," she adds, "but it's well worth while."

You can be a wife whose husband's admiring glances show continuing pride. Perhaps you do need a permanent wave, but if your hair shines from shampoos and brushing and looks neat, it is beautiful. Your nails may not be perfectly manicured, but if they are rounded evenly and hide no soil beneath their short tips they are always attractive. If your skin is clean and clear, no one will miss the powder. And your figure? Are you limiting sweet foods and taking fruits, milk, and vegetables in their place? They serve the double purpose of helping you to keep slim while providing the nourishment you need for maximum health.

Look again into the mirror. Are there tired lines of weariness in your face? If so, what about your sleep? Is it disturbed every night by the baby? Lie down every time you nurse him, whether he is breast- or bottle-fed. Lie down and

cuddle him as he eats. Perhaps now and then you will both fall asleep and you will get the extra rest you need.

Will nursing the baby spoil the shape of your breasts? Not unless you let it do so. Lying down beside the baby as you feed him helps *prevent stretching. Your doctor will probably tell you to have the infant nurse at one breast the first* ten minutes, then the other the rest of each nursing period. Wear a carefully fitted brassiere of the uplift type. Do not take it off or even undo it except when reclining, and then replace and fasten it before you sit up again. This prevents a heavy strain, which may stretch the tissues so severely they would never regain their former firmness.

Breast-feeding does not require a lot of fattening foods for the mother. It calls for extra minerals, vitamins, and proteins, but not fats. Drink plenty of milk each day, insist on whole-grain cereals, yellow and green leafy vegetables, and plenty of fresh fruits. There foods are essential to your health, whether nursing baby or not

As you read are you wondering where you will find time to follow these suggestions? Of course, housework must be done. It seems to take twice as long as it used to. Well-planned schedules are upset, and so is your house. Revise your



work schedule and see where you can cut down on housework. So long as the house is neat and clean no one will worry about the windows that could be polished or the floors that could be re-waxed.

Your husband would rather have a neat, trim, rested-looking wife **greet him with a confident smile in the evening than a glistening house. A wife who does not mention the minor and major woes she has endured during the day, but says with genuine interest, "What happened to you today, dear?" will hold the admiration of her husband, family, and friends, and indeed be a crowning glory of any family.**

Serve a simple, well-planned supper that is appetizing and nourishing. Plan meals ahead of time while busy with some household chore. It will save time once you begin to prepare the meal. Choose a varied diet that is easy to serve Elaborate dishes, sweets, and pastries take more time to make than simple foods, and are often less nourishing. You both need well-balanced meals to keep you healthy and happy. Should either of you get sick, who would earn the money, or who would take care of the baby? Safeguard your health and the health of your family in every way. Because emotions influence the body, it is common sense to keep them healthy too.

Meals may be interrupted by the baby, but impatience will not help you or the baby. Find the reason for the baby's distress, and then if possible remove it, so that disturbances in the future will be fewer Ask your husband for advice. That will please him. Let him feel assured that you include him with the baby and that you are working out your problems together.

There is an ancient saying that may help you when you begin to feel overwhelmed by tasks to be done: "There's another day coming, when I can complete this task: if there shouldn't be, then it will not matter." Set aside non-essential household duties and keep yourself attractive. Keep up your social contacts, and keep your husband and your baby happy. Then indeed motherhood will be your crowning glory.



Photo N Ramakrishna

"It's not easy, but it's well worth while."

RHEUMATIC FEVER

ROBERT B. RODMAN, M.D., F.C.C.P.

Rheumatic fever is especially harmful to children because of its after-effects.

RHEUMATIC fever is the most insidious of all the chronic diseases of childood. Many children and adults re partially or totally disabled day because of the heart disease esulting from it.

At one time it was thought that heumatic fever occurred only in e colder regions of the earth, but has been definitely established at it is found in every part of he globe; in warmer areas the ttacks are likely to be milder and ot so easily recognized. The isease prevails during the fall and inter months during the time hildren have the largest number f cases of tonsillitis and streptoocus sore throat.

Physicians are agreed that rheuatic fever is due to an allergy, imilar to hay fever or hives, except hat whereas hay fever results from n abnormal reaction to ragweed, nd hives comes from eating rotein to which a person is ensitive, rheumatic fever results rom a similar allergic reaction to ne type of streptococcus (a germ nder the microscope seen to grow n chains that look like strings of eads) that grows in the throat luring an attack of tonsillitis or treptococcus sore throat. Most hildren have infections from the pecial type of streptococcus during heir first few years, and because of reasons that are not thoroughly understood, some develop the tendency to react allergically to the germ

When this happens, the fever rises, usually fast, and one or two joints may become red, swollen, and extremely sore. It is usual for many joints to become involved at one time, but there is a tendency for the soreness to jump quickly from one joint to another. For instance, at the beginning a knee may be involved, but in a day or two, this may get better as an ankle swells and becomes sore. Wrist, elbow, hip, hand, or foot may be involved in rapid succession.

In all cases the heart is involved to some degree. Sometimes the damage is so slight that it is difficult for the physician to find it, in others the heart may be so badly damaged that the child will have extreme difficulty in breathing, and the body may swell or other signs of heart failure may appear. As the acute attack subsides, the damage in the heart will in some children be completely healed, but in many it will be

(Continued on p. 28.)

WHAT TROUBLE DOES TO US

(Continued from p 2.)

I asked these questions of a psychiatrist for whom I prepared observations of patient behaviour for a graduate research project. We reviewed the case history of a college girl who had a nervous breakdown. We were impressed that the pressures in her life were no greater than in the lives of many of us.

The doctor's response was this: "Of course some people are hit harder than others by a disappointment, because each experience has a different meaning to different people. Failure or frustration may be interpreted as rejection by one person, as punishment by another, and as personal inadequacy by still another. Our attitudes depend largely on what our early experiences were. The people who are defeated by frustrating events are usually lacking in a certain 'inner plus' that other people have."

I asked whether he meant emotional stability, and he replied, "Well, yes, partly that. But I was thinking of something more than just a neutral state of emotional balance. I am thinking of a kind of aggressive inner strength that the man on the street might call grit. My mother used to call it backbone. I don't believe people are born with it. They have to cultivate it."

In the years since that conversation I have thought of it many times As a minister of small-town parishes I have seen people under pressure at close range. My own invalidism as a result of a defective heart valve brought me face to face with physical frustration, financial insecurity, and shattered plans.

The years of hospitalization are behind me, but they are recent enough that I can recall vividly the weight of discouragement that rested on me at times, and the in-

(Continued on p. 25.)

Is Exercise Necessary?

THEODORE R. FLAIZ, M.D.

No part of your body can remain in good health without the benefit of exercise.

A FRIEND of mine once said he obtained his exercise going to the funerals of his exercise-minded friends. He was a hearty eater and substantially over-weight. A few months after he made this statement he passed away suddenly from a heart attack. Another friend said he was saving up his exercise till he retired, when he hoped to have time for some of the less essential luxuries. We hope he survives to enjoy his accumulated leisure for exercise. Doubtless he more accurately represents the average man in his thinking and attitude toward exercise than the first man.

A common observation is that such and such a man at fifty or sixty years of age started hiking, climbing, or swimming, and immediately passed away with a heart attack. We had better be pretty careful what exercising we do after fifty. Let us see why.

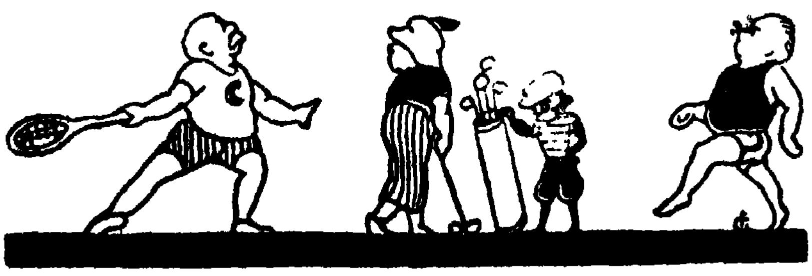
Nearly all babies are born with good blood vessels. Regardless of how we treat our blood vessels, they probably will serve us well for most of a normal life span. The condition of our blood vessels depends on a number of factors. Heredity certainly plays a part. In some families, in spite of gross deviation from temperate eating habits, individuals survive to advanced years. In other families, because of a hereditary weakness, critical blood-vessel disease may become evident at an early age in spite of comparatively temperate living. Heredity thus plays a part in blood-vessel health and consequently in life expectancy.

Food habits are indeed a large factor in blood-vessel health. The person who eats more than his body requires stores the extra food in microscopic pockets or cells among the various tissue cells of the body, and in time he becomes obese. Some of this fat is deposited on the abdomen, in the arms or legs, or in the face, and the only harm is the added burden and disfigurement. However, some of this fat is deposited among the muscle fibres of the heart and about the organs of the abdominal cavity, and there is great harm in altered function and health of the system involved. Other portions of this fat, particularly the fatty material known as cholesterol, is deposited under the delicate lining of arteries throughout the body. It may infiltrate the lining and weaken
Later it may harden and becor
the basis for the development
hardening of the arteries, the cau
of most heart attacks and strokes

Yes, food habits are definitely
factor in the development
changes in the body that may b
dangerous.

Now, how is exercise concerne
with these facts?

The man who neglects exercis
until he reaches fifty with some ur
necessary pounds probably carrie
a certain amount of fatty deposi
under the lining of his bloo
vessels. This deposit provides th
basis for a heart attack. If h
suddenly becomes exercise-minde
and joins a mountain-climbing
party; goes for a vigorous swim
particularly in cold water; or take
on a friend for a game of tennis
he is likely to have a coronary
heart attack. He may be set for
heart attack anyway, but th
sudden exercise certainly con
tributes to an earlier attack. Th



·rson totally unaccustomed to gorous exercise is not prepared r strenuous exertion. If he disgards this fact he may be aking a fatal error.

The body has remarkable owers of adaption. It ac- ·mmodates itself to any situation change of situation. If muscles e not exercised, they atrophy to ily a fraction of their former size id lose their strength. If a joint not moved over a period of ne, it becomes fixed and bound / fibrous tissue, which slowly ·rms in the area. The religious cetic who holds an arm con- intly in an upward, extended ›sition ultimately will have a stiff m shrunken to little more than e bone and skin. The athlete rough controlled exercise builds ɔ muscles and other structures of e body to their optimum strength.

In the inactive body all ructures gradually deteriorate. [uscles lose size, strength, and ·ne. Fatty tissue is laid down mong the muscle fibres. Joints be- ›me limited in movement. Because ıe muscle fibres in the heart wall re working only to a fraction of ıeır capacity, they dwindle in size and strength to the level of minimum necessity. They are interspersed with many fatty cells, which weaken the structure. The heart as a whole is working only to a fraction of its capacity because its muscle fibres are working only to a fraction of their capacity, and the blood vessels running over and through the wall of the heart are not exercised and kept supple and elastic.

The lack of activity favours the



depositing of fat in the walls of the blood vessels. As the lining of the blood vessel in a certain section is damaged by the infiltration of the fatty material, cholesterol, the integrity of the lining tissue is weakened and the vessel narrowed at this point. As the blood in the artery flows over the place made narrow by the deposit, the blood cells are slowed and injured and a clot is formed, sometimes com-



pletely blocking the artery. If this occurs in one of the coronary arteries, which supply blood to the hard-working muscular wall of the heart, the result may be sudden death from coronary occlusion. Absence of exercise with deposit of fat contributes to producing a situation potentially dangerous.

We see why it is exceedingly dangerous for the person unaccustomed to exercise suddenly to start vigorous activity of any form. On the other hand, we see that the person who maintains physical activity at a high level through youth, middle life, and even to fairly advanced years has kept all the structures of the body—muscles, joints, digestive system, urinary system, respiratory system, blood vessels (particularly their linings)—in a healthy, supple condition. In such people the sudden exertion of a vigorous climb, a game of tennis, swimming, or more utilitarian activities provided in work with a saw or spade about the home will not find a weak spot conducive to coronary occlusion.

Wholesome exercise is of value not only in the vital matter of blood-vessel health but also to all the functioning organs of the body.

The digestive system of the inactive person is inclined to collect fat. It appears in the walls of and around the intestines. This deposit of fat limits freedom of intestinal activity, with a probable tendency to poor bowel action. It permits a greater possibility of serious complications such as adhesions, with bowel obstruction. When surgery

(Continued on p. 32.)

EXERCISE FOR HEALTH

▸ IF YOU are one of those lucky ersons to whom the doctor has ıid, "There is nothing wrong with ou that a good walk in the fresh ır won't cure," then perhaps the ‹ercise road to well-being is the ne you should take.

▸ If you are plagued with a tired, eary, and achy feeling for no :ason at all, and the doctor has ssured you it is not due to some idden ailment, the trouble may be lack of exercise. Even though your work may keep you on your feet most of the time, it probably doesn't give you the proper exercise to keep you feeling strong and healthy.

● The office worker who sits at his desk from nine until five needs exercise much more than the manual worker.

● The human body, a most delicate mechanism, must be exercised if it is to work properly.

STORY TIME

THE TORN PAGE IN WALTEN'S HISTORY BOOK

Ellen E. Morrison

JOHN had never liked Walten. They had been in the same class for over a year, but they had never been friends. Perhaps it was jealousy, John wasn't sure. Walten was a leader in the class and a star in most of the sports. He was always being elected to things, too. More than that, he was nice looking. He was not boastful about the things he could do, and that made him even more likeable to everyone. Everyone except John.

Perhaps it was just that Walten was all the things John wanted to be. Walten seemed to sense John's dislike. At first he had tried to be friendly, but after being rebuffed several times, he had left John alone. So the matter stood for many months, with the two boys not even speaking to each other except when they had to.

Then one noon hour, after the class had gone to the cafeteria, John got permission from the teacher to go back to the classroom to get his lunch money, which he had forgotten. He found it quickly, but in his hurry to get back to the cafeteria, he knocked a book off someone's desk .

Hurriedly he picked it up and noticed that, by falling face down, many of the pages had been crumpled. He realized immediately that it was Walten's book and to his dismay, he saw that the pages were not only crumpled—two of them were actually torn.

Carefully he smoothed them, closed the book, and replaced it on Walten's desk.

"He's sure to notice," he thought. "It's his history book, and just about where our lesson is for today." Fearfully he glanced about to be sure no one had been watching, then he left hastily.

"I should tell Walten or the teacher," he kept telling himself. But admitting guilt was a hard thing to do. There was a rupee fine



that had to be paid to the school whenever a book was damaged, and he didn't want to pay a fine for someone else's book, especially Walten's. Perhaps the torn pages would not be noticed. Anyway, no one knew who had done it.

After lunch it was time for the class to study history. John looked out of the corner of his eye when Walten opened his book. At once the damaged pages opened. John could see the puzzled look on Walten's face. He thought for a moment that Walten was going to report the damages, but instead he moved his papers over to conceal the torn pages, and remained quiet.

John breathed a sigh of relief and relaxed. If Walten d report the tear, the whole ir might go unnoticed. But tl expected happened.

Miss Bawar, the teacher, the class an assignment written from the history book the pupils began work at Then Miss Bawar walked dow aisles looking at their work. V she reached Walten's desk, paused. In a moment she as "How did your history book torn, Walten?"

Everyone in the class looked and Walten's face coloured embarrassment. "I—I don't kr Miss Bawar," he stammered.

"Now, Walten," Miss Ba continued kindly, "when your b has been damaged that mu surely you must know how it h pened."

"But, Miss Bawar," Wal insisted earnestly, "I really do know how it happened. I didn't it."

"Well, perhaps you did not your book away as carefully as should have," Miss Bawar c tinued. "It is checked out to yo so I'll have to ask you to pay t fine." Walten looked miserab and the rest of the class we sympathetic. After all, it w Walten's book, and two pages we torn. No one could deny that

(Concluded Next Month)



WHAT TROUBLE DOES TO US

(Continued from p. 21.)

nse outside pressures bearing on ›me of my fellow patients.

Working with deeply troubled ;ople and wrestling with my own fficulties have brought me one ıshakable conviction: No one can ford not to insure himself against e destructive responses that the ınd can make under pressure.

The person who fails to plan for his future is unrealistic and improvident. He leaves himself and possibly others unnecessarily vulnerable to financial burdens that emergencies can bring The person who does nothing to insure himself against the emotional burdens that adversity brings is not only improvident but is courting tragedy.

Let us notice some of the common ways in which people respond to frustrating events

A young man whose application to Government for a coveted post was rejected felt a deep disappointment, but managed to pull himself together. Manfully he reassured himself that he had met the jarring experience and was untouched by it. But before long the people who were closely associated with him noticed a loss of enthusiasm and a growing lethargy. Five years later he was a much less happy and less interesting person. He gave up the clear-cut goals and purposes that once had lent zest to his existence.

Why? Because consciously or unconsciously he did not want to be bruised again. He listened to the inner suggestion: "Don't aim so high, and you won't get batted down." This kind of person is a drifter.

After a crippling accident a girl began to picture herself as the victim of a series of bad breaks and managed to disclaim all responsibility for her own unhappiness. She developed a kind of convenient amnesia about all the good things that came her way. Dramatizing every disappointment, she soon had people avoiding her, which added to her feeling of injustice. Let us call her a "victim."

A man had been asthmatic from childhood. He lost his wife; and shortly afterward his brother, who was his moral support, moved across the continent. The double blow started bitterness in him, and he developed an inner rage. His asthmatic seizures increased, and he grew gruff and unpleasant toward his associates. Perhaps the term "the enraged" describes him

Many more examples of poor adjustment to misfortune could be given. Some people are shattered by financial reverses, disappointment, repudiation, family conflict, invalidism, and bereavement.

Can you insure against personality injury under pressure? Before adversity strikes set about developing "inner plus." "Inner plus"—spiritual power, adjustability, a sound philosophy of life—is a quality that must be consciously

(Continued on p. 36.)

EYES, EARS AND EFFICIENCY

(Continued from page 15.)

ı their legs and thus infect other althy infants and children by ghting on or in the area of their es.

The eyes of smokers and drinkers e always predisposed to infection. oreover, smokers and wine inkers have very poor vision later in their life. If you want to have ur eyes healthy do not smoke or ink Avoid smoke getting into ur eyes It is very injurious to the es

Avoid using handkerchiefs, wels, and pillows and bedsheets ed by people suffering from eye seases

The Ears

Deafness is often due to accmulated wax. Remove the wax rinsing the ear with a warm soda arb solution. Diseases of the se, throat, middle ear (otitis dia) and the smoking of tobacco ıy cause deafness of the ears. nsilitis and frequent attacks of d may cause deafness.

Ear-ache is always a warning. If you do not treat it an abscess may develop. This happens when you have a running ear. In case of mastoiditis, there is a running ear followed by acute pain at the back of the ear. Never ignore an ear-ache. It may be serious.

Among old people deafness is generally due to ossification or bony tissue growing over the oval window separating the middle and the inner ear. This bony tissue stops the sound waves from reaching the drum. This can be remedied by a surgical operation.

Quinine administered in a large dose may lead to Quininism and subsequently cause deafness.

If you suspect that your child cannot hear properly, try to find out whether he has recently been given an overdose of quinine. You may even try a few tests. Say something to the child while standing behind him. If he does not seem to hear, then try again. If he still does not hear, then he should at once be taken to a doctor. If the child's adenoids or tonsils are severely infected, your doctor may advise surgical treatment.

If you take care of your eyes and ears they will serve you for a lifetime.

HOMEMAKERS' HELPS

VITAMIN B₁

M. Ninaj Larson

IT IS nothing uncommon to hear a friend say, "I feel ever so much better since taking the Vitamin B that the doctor prescribed for me recently." Whenever the doctor prescribes Vitamin B, it is well to check our dietary habits carefully, for a lack of this essential vitamin in our food is responsible for much of our difficulty.

Many believe that only the poor are subject to conditions and diseases resulting from malnutrition and inadequate diet. But nutritionists and physicians are only too well aware that large numbers of the middle and upper classes are also ill with diseases brought on by malnutrition—chiefly because of ignorance as to what constitutes a wholesome and nutritious diet, rather than because of financial inability to supply a correct diet.

There is a group of vitamins included in the "B" group of vitamins. There is the "B_2 Complex" group, including niacin, pantothenic acid, pyridoxin, and others. And there is Vitamin B_1, or "thiamine," as it is popularly called at present. Nutritionally it is also known as the "anti-beriberi" or "anti-neuritic" vitamin. We shall discuss this B vitamin.

Thiamine is one of the easiest of vitamins to get because it is found abundantly in those foods that make up the staple part of our diets.

Though thiamine is found in many foods, the richest sources are unmilled grains and millets, pulses, and nuts, especially groundnuts.

Thiamine is used by the body to keep the nerves and the brain in a strong and healthy condition; it is needed by the body in the burning up of sugars and starches; it helps the body in its work of dis- charging waste materials from the body. It assists the body in other work also, but the chief thing to remember is that it involves those parts of our body that have to do *with life itself and the work of the nerves and of the brain—that great* director of the human body.

When there is a shortage of this important vitamin, there is a loss of appetite, the work of the stomach and intestines is greatly slowed down, the colon becomes so relaxed that it cannot function properly, and the result is consti-

RECIPES

Whole Wheat Bread

One tablespoonful yeast; flour (100% whole wheat); 1 quart water; 2 tablespoonfuls gur syrup; 1 tablespoonful salt; 2 tablespoonfuls oil.

Soften the yeast with ¼ cup lukewarm liquid. To the rest of the liquid add enough flour to make a stiff dough. Add gur, salt, oil, and softened yeast. Then knead. Place dough in greased bowl, cover and let rise until double in bulk, or until indentation remains when tapped with finger. Knead down and let rise until about double in bulk the second time. Mould into loaves and let rise until indentation, when tapped with finger, comes out slowly. Bake at 450°F for 15 minutes, then lower to 350-375° for 45 minutes.

Bread Sticks

One cup milk; ¼ cup oil; 1 tablespoonful sugar; ½ teaspoonful salt; 1 tablespoonful yeast; 1 egg; 4 cups whole wheat flour.

Scald the milk. Cool to lukewarm, and add oil, sugar, and salt. Add yeast cake, well-beaten white of egg, and flour. Knead and let rise. Roll to ⅜ inch thickness, cut into strips ¾ inch wide and 7 inches long. Place on oven sheet far apart, brush with beaten egg yolk. Let rise to double size. Bake at 400°F until brown and crisp, about 20 minutes.

Dhal and Potato Soup

Half cup masur dhal; 1 onion; butter; 2 or 3 medium potatoes; milk; salt.

Fry the finely chopped onion in small amount of shortening. Add dhal, diced potatoes, and salt. Cover with water and cook until the vegetables are tender. Add milk to make the desired consistency. Heat and serve. Chopped parsley may be sprinkled over the top.

Dhal Patties

One cup cooked red dhal, ½ cup chopped walnuts or other nuts; 2 eggs if desired; ¼ cup whole wheat flour; onion, salt, and seasoning to taste.

Add whole wheat flour to cooked dhal when it is cool, and stir well; add remaining ingredients and mix thoroughly. Shape into patties, roll in bason (raw Bengal gram flour), and brown in hot vegetable oil.

pation or sluggish elimination.

Dr. Mary Rose, in reporting the results of an experiment carried out on a group of individuals, says that a lack of thiamine produced irritability, depression, unco-operation, loss of manual skill, inefficiency of work, increasing forgetfulness, sleeplessness, fatigue after very little exertion. When thiamine was increased, these symptoms gradually disappeared and the individuals felt better.

However, the greatest effect of a lack of thiamine is a degeneration of the nerves which brings on a partial or complete paralysis of the limbs. This disease is called "beriberi" and is characterized by great pain. Dropsy often accompanies this disease and also a weakness of the heart. Only recently has it been realized that a deficiency of this vitamin may be responsible for various forms of nerve disorders

I remember that the cases of beriberi we met in our work in Travancore were not from among the poor as a rule, but from among those who had the means to supply themselves with a varied diet As soon as thiamin was added to their diet in the form of unmilled grains, and pulses such as dhal, the symptoms began to disappear and soon the patients became well.

A medical friend from a hospital in Andhra told us that it was their practice to cure beriberi cases by giving the patients water to drink in which rice bran had been soaked for several hours.

If you go to any bakery and watch for a while, you will notice that customer after customer buys white bread. If you were to study the eating habits of rice eaters for any length of time, you would notice that commonly white rice makes up the staple part of the daily diet.

The surest way of making it possible for one to suffer from degeneration of the nerves, and to have difficulties with various digestive processes, is to let white bread and products of white flour, and polished rice form the staple part of the diet.

Thiamine is found in the germ of the grain and in the outer layer of the grain. When the grain is husked and polished, the Vitamin B_1 goes When we feed our cattle on the bran that we get as a result of this milling process, we are feeding our cattle better than we are feeding our families.

In some sections of the country it is customary to parboil the paddy before husking it. This parboiling diffuses the Vitamin B_1 all through the grain so that even though parboiled rice is husked, much of the Vitamin B is still present in the grain. The great danger with parboiled rice, however, lies in the many washings that the rice is subjected to, for thiamine dissolves in water, and much of it is lost in the washing water. Of course what little thiamine is left on the raw polished rice, goes too, and the nutritional value is reduced all the more.

To ensure an adequate amount of thiamine in the diet that will bring strong healthy nerves, and a strong healthy brain, and that will enable the digestive organs to do their work properly, we need to make whole grains the staple part of our diet In addition to whole grains it is necessary to include about three ounces of dhal per person, or some other similar pulse (more than this putrefies in the intestinal tract), and some nuts. Groundnuts have more thiamine than other nuts.

We would like to explain how thiamine is connected with the oxidation of sugars and starches It has been demonstrated conclusively that Vitamin B_1 enables the brain tissue to have the power to use oxygen for carbohydrate combustion. Where individuals have been lacking in this vitamin, the administration of it restores to the brain this power to use oxygen for the burning up of sugars and starches.

Why should a lack of thiamine make the heart muscle weak? The reason is not difficult to find. Pyruvic acid accumulates in the blood when there is not enough thiamine in the daily diet. This acid poisons the muscles of the heart and slows its beat. The giving of thiamine brings about a prompt and nicely regulated response.

But the changes in the nerve tissue which has degenerated are not remedied as soon. It takes a much longer time to restore the nerve tissues to a normal condition.

How easy it is to prevent such difficult and complicated conditions!

1. Eat whole grains and millets.
2. Eat dhals and other pulses.
3. Eat nuts, especially groundnuts.

HOUSEHOLD HINTS

- Wash dusters and brooms often. Sun them after you wash them.
- Are you troubled with not knowing what to do about that piece of paper and other rubbish that you want to throw away? Keep several waste baskets. Distribute them in the various rooms of the house.
- Try wiping dust from furniture instead of flicking it off with a cloth. You will especially appreciate this way of dusting during the hot, dry, dusty summer.
- Did you ever stop to think what fifteen minutes a day spent in learning some new skill can do for you?

RHEUMATIC FEVER

(Continued from p. 21.)

found after the attack that there is a certain amount of permanent injury to one or more valves of the heart.

This is the picture in the older child or the adult. In the younger child there may not be any recognizable involvement of the joints, and the diagnosis may rest entirely on the discovery by the doctor of damaged heart valves.

The onset may not always be abrupt, but may be insidious and the illness mild, or the disease may show itself only by ill-health without any obvious cause. Loss of weight, lack of appetite, getting tired too easily, or frequent nosebleeds may be the first sign of illness. The mildness of the illness, however, is no index of the danger to the heart, and serious permanent damage to the heart can occur in an attack so mild as not to be recognized.

The outlook in an acute attack is usually good. Death is unusual. The danger lies in the amount of damage to the heart that results. Recurrence is the important factor to be guarded against. During the fall and winter months the child who has had an attack of rheumatic fever should be guarded against contact with anyone having a sore throat or a cold.

During an acute attack treatment by a competent physician is essential. Rest in bed is an absolute requirement At times children with rheumatic fever are restless, and it may be necessary for the doctor to take action to keep the child quiet. A well-rounded diet should be given, including an adequate amount of protein. Because in this disease there is need for taking much vitamin C, citrus fruits and fruit juices should be used generously.



In two or three weeks the fever and the pain and swelling in the joints will disappear, but the doctor will keep the child under observation for several weeks. If after that the electro-cardiogram and blood tests are satisfactory, he will allow the child to gradually get out of bed.

The time taken depends on the severity of the disease and the response of the child to effort.

After all signs of the acute infection have disappeared, the child will probably be allowed to engage in all the activities of normal children, even though there may be a mildly damaged heart valve. If there is serious heart damage, the doctor will prescribe a routine of suitable and progressive exercises.

The important thing to remember is that rheumatic fever follows streptococci infection and that you should guard your child against it.



"THE BATTLE OF THE GHEES"

(Continued from p. 5.)

Of course, in Southern Asia the conflict, "the battle of the ghees," as it is sometimes called, is waged between the butter-fat-ghee wallas and the vegetable-ghee wallas! When compared with animal ghee, *vanaspati* is equally nourishing and has the same energy value, which is an important function of fat. In some ways, however, *vanaspati* is better than ordinary oils because it is free from impurities that are usually present in oils. It is prepared under strict government specifications and supervision. It is sold in clean sealed tins and is the most hygienic fat that is available in the country. Also those who realize the value of the money they earn and spend for food should know that inasmuch as *vanaspati* is suitable for all types of cooking, it is more economical than a combination of ghee and oil which is the practice in so many homes at the present time.

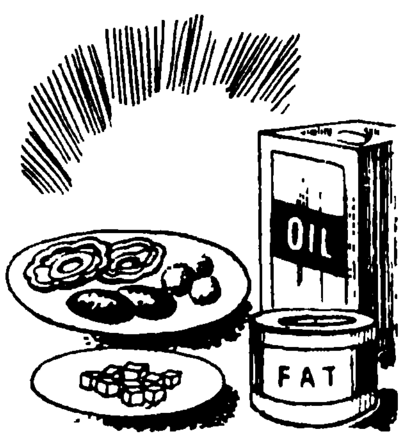
Another argument that is brought up as a reason why *vanaspati* should not be manu-



factured or used, is that some people utilize *vanaspati* for adulterating ghee. Yes, it is sometimes used in that way but we might suggest that other things are also used for that same purpose. Animal fat, crude oils, vaseline and other substances of a more or less harmful nature are also used by some unscrupulous people because as we have pointed out, pure ghee is scarce and very expensive. We recognize that the adulteration of food has in some areas assumed scandalous and alarming proportions We recognize that in some areas there is hardly a commodity which is not adulterated by someone. But that is a problem for which the producers of the product cannot be blamed nor held responsible for any more than rivers and wells can be blamed for adulteration of milk. It is a problem which must be solved, it is true, but it is a problem which must be solved by government supervision, stringent legislation and effective enforcement

In consulting with the manufacturers of various types of *vanaspati* it has been found that adequate measures are enforced to prevent the adulteration of ghee. All *vanaspati* containers show prominently that they contain hydrogenated oil and it is an offence to stock and sell *vanaspati* and ghee on the same premises. Also the public should know that *vanaspati* has to contain a certain percentage of sesame oil to make the adulteration of ghee if attempted, more easily detectable through a simple chemical test. While it is possible that the general public is not aware of these stipulations so far as the manufacture of *vanaspati* is concerned, we believe that it will be well for our readers to know some of these facts. Our readers should also know that the manufacture of *vanaspati* is subject to very stringent government control. It must conform to high quality standards which are prescribed by the Government. The Government has decreed that *vanaspati* shall not contain any harmful colouring or flavouring or any other substance that is deleterious to health. Further the Government has insured the ready digestibility of *vanaspati* by specifying the maximum melting point 37° Centigrade, which is body temperature.

It is interesting to note that Doctor Godbole and Doctor



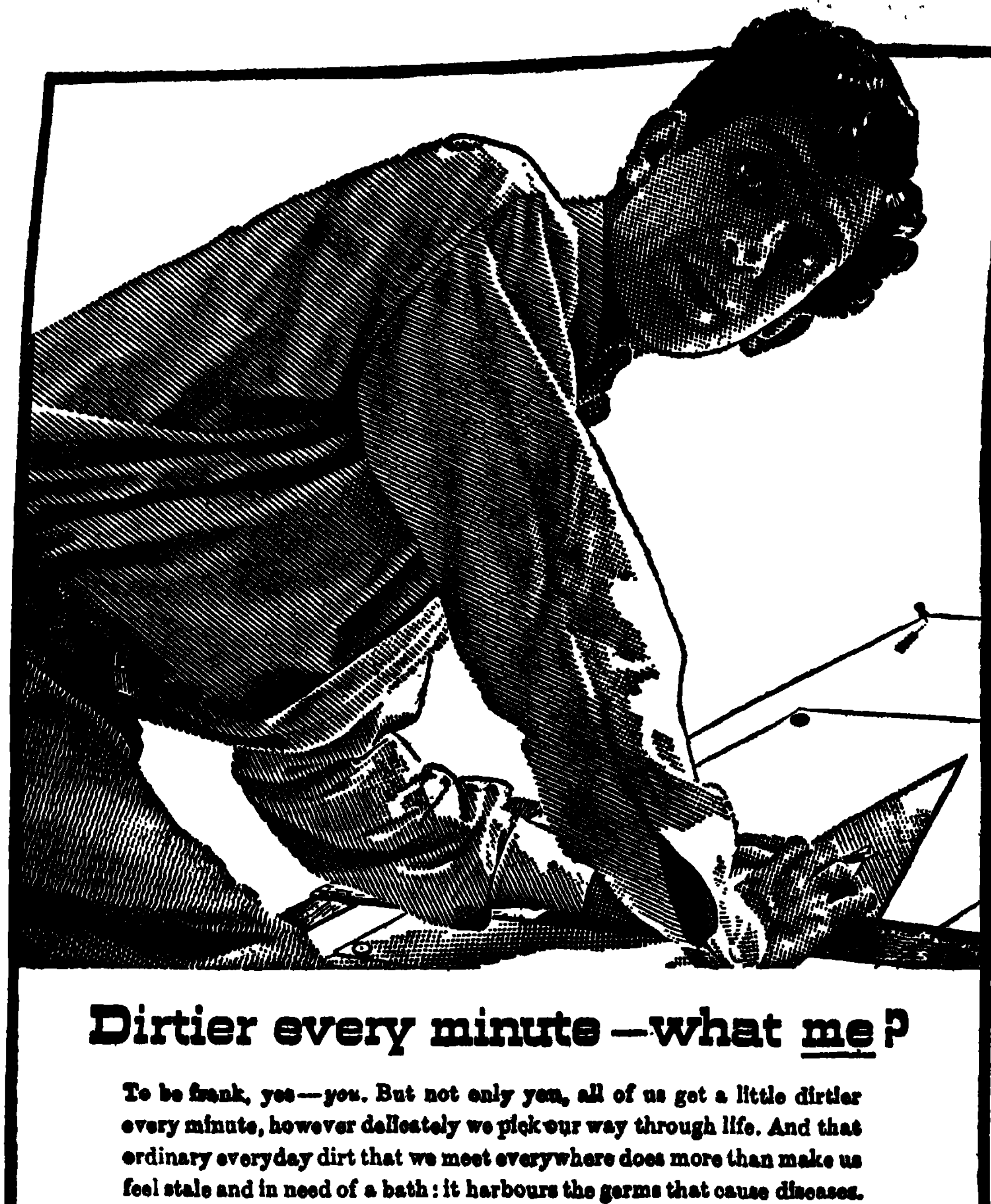
Sadgopal of Benares Hindu University, in their book, *Butter and Fat,* (ghee), state that they had examined approximately fifty samples each of cow and buffalo butter-fats They found the melting point of butter-fat varied from 28.-5°C. to 42°C., and that the melting point of buffalo butter-fat from 32°C to 43°C. It can be claimed therefore that *vanaspati* has a comparable melting point. The digestibility of a fat primarily depends upon its melting point. Any fat having a melting point not higher than 40° is fully and easily digested.

It is contended by some that *vanaspati* is not as nutritious as ghee because it is normally deficient in vitamins. That is correct. *Vanaspati* has no vitamins unless they are added to it. The vegetable oils from which it is manufactured do not in themselves contain any appreciable amount of vitamins. It is also true that an average sample of pure cow ghee contains only a limited amount of vitamin A which to a large extent is destroyed when the ghee is used for normal purposes of cooking and frying. Dr. Aykroyd has said that "If we compare ghee as actually sold and consumed with *vanaspati* with respect of vitamin A, it cannot be claimed such ghee has any remarkable advantage over *vanaspati.*"

However, we all need to recognize and remember that neither ghee nor *vanaspati* nor any oil can be regarded as a complete diet by itself No one would be so foolish as to try to live entirely on *vanaspati* or ghee or vegetable oil Fats are primarily valued in the diet as sources of energy and the vitamins which they may supply are a very secondary consideration. In 1945 the British Ministry of Food published a manual on nutrition in which they stated, "All common fats possess almost the same value as food. Some natural fats may contain other nutrients mixed with them, but so far as the fats themselves are concerned the value may be taken as equal."

We know that some brands of *vanaspati* and possibly all of them are untouched by human hands during the manufacture and are carefully protected from contamination at every step in the process. Some of the brands of *vanaspati* are fortified with vitamin D. That is, vitamin D is added to the fat. This is done because vitamin D is essential for the building of bones and the preventing of rickets in





children and also as a preventative of osteomalacia, softening of the bones in adults.

So we, our regular readers have noted, have taken the attitude that *vanaspati* ghees are useful and definitely have their place in the food economy of India and other countries of the world. It would be a very grave error if the public should refuse to make use of these valuable food sources simply out of prejudice or ignorance and for that reason we have discussed the matter at length with you in this issue of the "HERALD OF HEALTH" magazine and we trust that our comments will have cleared up some questions that may have been in the minds of some of our readers

L. J. L.

GARDENING FOR HEALTH

THE CARE OF CAULIFLOWER, CORN AND LETTUCE

D. G. Cooper

THE culture of Cauliflower is practically the same as that of Cabbages, with the exception, that this vegetable requires continuous care from the time of sowing the seeds till the crop is harvested. Lack of proper care usually results in small or poor heads, and quite often none at all. The secret of having a bumper crop is to plant the seedlings in a rich soil in which an abundance of well-rotted stable manure has been incorporated. Plenty of lime in the soil is also essential.

Sow the seeds in August and September in the same manner as Cabbages, and transplant the seedlings when they are about four inches high. The plants should be about thirty inches apart in the row and a distance of three feet should be maintained between the rows The soil should be kept moist and cultivated frequently, but very shallow cultivation is necessary. As soon as the curd begins to form, the outer leaves should be tied over the head, shutting out sunlight. This will cause the curd to remain white, firm, and tender. Failure to cut the heads in time, will cause the curd to separate.

Corn

THE sweet Indian Corn, which is rich in calories, should occupy at least a small plot in every kitchen garden. The country Corn, though larger in size, is not half as tasty as the Golden Bantam or the Black and Red Mexican varieties.

Sow the seeds at the beginning of the monsoons in rows two feet apart and eighteen inches from plant to plant To ensure quick growth, sow the seeds at the correct distance It is necessary to earth the plants as they grow bigger. Cultivate the soil frequently As most varieties of Corn are edible for only a week after maturity, it is advisable to make successive sowings every two or three weeks A pound of Corn seeds is sufficient to sow a row of about 125 feet.

The Corn Ear Worm which eats the immature kernels at the tip of the ear, should be kept in check by dusting with sulphur and Lead Arsenate in equal parts.

Lettuce

FOR sweet, tender and crisp Lettuces, sow the seeds in the cold season, preferably at the termination of the monsoons. The Cos Lettuce, which has long upright leaves, is most commonly cultivated for market use. However, the Cabbage Lettuce is more superior, inasmuch as it is desirable both in appearance and taste.

Lettuce thrives best in a soil which is not heavily fertilized. Stable manure and nitrogenous fertilizer should be used very sparingly. Remember, Lettuce must grow slowly for best development.

Sow the seeds in a pan, and transplant the seedlings when the fourth leaf has formed. Space out the seedlings eighteen inches apart each way. For better results, sow the seeds very thinly in their permanent beds, and prick out the young plants if they grow too close together. In the case of Cabbage Lettuce, the outer leaves may be drawn and tied together. This will result in a better head formation.

GARDEN CALENDAR FOR APRIL

Plains

Vegetables.	No vegetable can be grown during this month.
Flowers.	Sow Portulaca and Nicotiana seeds. Achimenes should now be potted. If Caladiums have come to leaf, give liquid manure.
Fruits.	Water Melons and Strawberry plants profusely.

Hills

Vegetables:	Sow Corn, Beet, Beans, Peas, Rhubarb, etc.
Flowers.	Pot Tuberous Begonias, Gloxinias, Hyacinth, Narcissus, etc.

IS EXERCISE NECESSARY?

(Continued from p. 23.)

is necessary the over-weight or inactive person is a poorer risk than the athletic or well-exercised person.

Every function of the body may be measurably impaired by lack of regular exercise. The person who is not exercising is not experiencing the full satisfaction of living for which he has capacity.

You will get your proper exercise when you recognize how important it is for you to do something about it. Think of exercise under two categories: the purely recreational exercise of sports or games, and the exercise gained from activities in everyday life. Farming, mining, lumbering, and many other occupations provide adequate physical activity. The office worker, the housewife, the businessman, the professional man—teacher, physician, minister, lawyer—rarely find in their work adequate recreational exercise. They can get it by regular devotion to sports or games. Hiking, swimming, boating, golf, tennis, volley-ball, are all good. Regular attendance at a good gymnasium is excellent. Unfortunately these activities are not generally pursued with regularity, and often are allowed to lapse altogether.

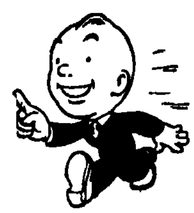
Perhaps the most neglected opportunity for exercise, and one of the most valuable, is walking. The automobile has almost completely deprived us of our best form of exercise. One of the nation's leading authorities on heart disease said his opinion was that, next to diet, walking is our most effective weapon against coronary heart disease.

How very much better we would feel if we made a practice of enjoying several miles of walking daily. If you live a half mile from your work, walk to work in the morning, home for lunch, back at noon and home in the evening—two miles of pleasant, life-giving exercise. If you live a quarter of a mile from the market and are not purchasing too heavy a load of goods, walk to the market and back. Try a good brisk walk in the evening—not just once, but as a regular plan.

At first these habits may require some purposeful planning and staying power, but if you persist you will find them almost indispensable—and of untold value.

Sports, or recreational exercise, is perhaps the most zestful and effective exercise. Walking may become of equal value and enjoyment.

Less inspiring and less palatable as a regular diet is that still very useful exercise callisthenics. We



have all at some time nobly started a set of exercises—various rhythmic routines, setting-up exercises, push-ups, or weight lifting, chinning exercises

In home callisthenics, the value is not so much in muscles developed as in joints exercised, back limbered, abdomen well exercised and massaged, and lungs well filled. Home exercises are not to be lightly esteemed.

Exercise may be recreational, occupational, or the humble home callisthenics variety. If it is a consistently regular feature of your daily life, it will contribute to the better performance of every function of your body—better appetite, better digestion, better elimination, better circulation. It will probably contribute to more adequate heart performance for perhaps years longer than without it. It will contribute to clearer, keener, mental activity and to sounder sleep at night. It will contribute to a sense of well-being. You will be abundantly rewarded for the time and effort you expend in exercise.

Be sure not to indulge in too-hard exercise. If you are a desk worker, get out of doors, but do not try to work too vigorously. Even a younger person must be careful not to strain his body with sudden extra effort.

FOOD POISONING

(Continued from p. 17.)

the poisonous organism affecting the plankton is universal in distribution. Centuries ago American Indians recognized the danger signal of "red water," which always means an infested area. At night this is a beautiful luminescent sight. The infected plankton can also be responsible for food poisoning through clams, lobsters, and oysters.

Agricultural products are not always innocuous. We may recognize the deadly nightshade and strychnine, but we easily overlook such poisonous plants as the fava bean. Eating the fava bean or inhaling its pollen (it is more common in Mediterranean countries) produces an acute illness in a few minutes. It is characterized by anæmia, nausea, vomiting, headache, dizziness, and even collapse. Most patients recover in a week or ten days, but ten per cent of the victims die.

Ever heard of solanin? It is a poisonous alkaloid that develops in the germinating potato when green by exposure to the sun. Housewives are advised to discard green and sprouted potatoes.

Ptomaine poison, *per se*, no. But food poisoning still occurs despite tremendous scientific advances in handling (legal control, canning, refrigeration, and sanitation). By food poisoning we mean non-bacterial poisoning.

?

MAL-ODOROUS SWEAT: Ques: ‘What causes yellow, mal-odorous ‹eat, and what is the remedy?”

Ans.—Yellow perspiration, which av stain the clothing may be due the presence of jaundice, which secondary to liver disease. How-er most types of perspiration are ie to just plain sweating. Wash irefully once or twice a day with inthol soap, which will destroy the icteria, which are largely responsi-e for mal-odorous perspiration.

?

SUN-GLASSES: Ques.—“Is it irmful to wear dark sun-glasses?”

Ans —It is better not to wear dark asses as they do damage the eyes the eyes feel weak when exposed , too much light, there is probably deficiency of Vitamin A in the diet.

?

MOONLIGHT: Ques —“Does oonlight have any beneficial effect i the body?”

Ans —As far as we know, moon-ght has no effect whatsoever on the uman body.

?

DISCOLORATION OF URINE: ues: —“I have recently noted that my urine is abnormally white in colour Please recommend treatment to cure this?”

Ans --We would have to examine your urine to determine the cause of the white colour before we could prescribe treatment. I would advise you to have your urine tested by a reputable physician.

?

NASAL GROWTH: Ques.—“From childhood I am susceptable to frequent colds, and sometimes my nose bleeds. The doctor said I was suffering from catarrh. When I was twenty-five years old I had a nasal growth which was removed. It started growing a second time and I had it cauterized, but it has begun growing again. What would you advise me to do in the matter?”

Ans.—You are probably suffering from an allergy. Pyribenzamine



THE DOCTOR SAYS

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2 No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases

3 All questions must be addressed to The Doctor Says Correspondence personally with the doctor is not available through this service

4 Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES Answers cannot be expected under ONE MONTH

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tablets, half a tablet twice a day may control your affliction. This should be given under the supervision of a well-qualified physician

?

MENTAL DERANGEMENT: Ques.—“My sister aged thirty-three, married some fifteen years back, and has five girls and a boy, seven years old Her husband was unable to provide for the family and ran away some five months back, while she was pregnant seven months, and her previous daughter aged two was on her death bed Even before her husband left, she was complaining that she felt nervous and uncomfortable and wished to get out sometimes on the street but actually did not. After the birth of the baby she complained of severe mental disorder. After two months her husband also returned. The previous girl is now completely recovered, but still my sister complains that she does not feel of this world and her mind is greatly disturbed. I consulted the best physicians and specialists but have not received benefit. I consulted a psychiatrist who says that she is suffering from schizophrenia of an early type. Can you tell me anything regarding the disease?”

Ans —Disease of the mind is quite common and with modern treatment is not at all hopeless in most cases. Without examining your sister, I am not in a position to determine the type of mental illness she apparently is suffering from Schizophrenia is one of the commoner types of mental disease. It is so named because a person with this diagnosis has a split mind. The patient suffers from delusions of persecution or sex or thinks he is wealthy and is some wonderful person He has hallucinations, etc There are four recognized types of Schizophrenics, Simple, Hebephrenic, Catatonic and Paranoid.

Shock treatment either with insulin or electricity is helpful in many cases. Recently reports indicate that the drug Rauwolfia Serpentina is also effective in treating certain types of mental diseases

?

ENLARGED MALE BREAST: Ques —“I am twenty-six years old and have been suffering from gynomastica for almost ten years. My breasts are very soft and fairly large I have been examined by various doctors and treated by them with no results Apart from an operation is there any treatment to cure this?

Ans —In this type of breast hypertrophy, some hormonal imbalance is responsible The use of testosterone probionate has given temporary improvement, but this method may produce testicular atrophy. This condition usually is only temporary and disappears eventually without any treatment.

?

POLIOMYELITIS. Ques.—“When I was four or five years of age I was stricken with polio and as a result one of my legs has become thin and weak Can there be any improvement on this? I shall be very grateful to you if some remedy is suggested.”

Ans.—Whether there can be improvement in building up the muscles and strength of your legs after having had polio at five years of age, depends upon your present age somewhat Physical therapy administered by a well-qualified therapist as electrical stimulation and hydrotherapy and exercises may be of benefit. It also depends to a considerable extent upon the amount of damage you sustained to your nerve system at the time you had polio.

THE LAST WORD

Broadcasting Heart Beats

RADIO broadcasts direct from the human heart have been made possible by a new device developed at the U. S. Naval Medical Research Centre at Bethesda, Maryland.

At distances as great as a quarter mile, these broadcasts reveal what is happening to the heart while a person is at work, playing golf, just walking around, or lying down in bed.

The new device is called a broadcasting electrocardiograph. The conventional electrocardiograph is the standard tool of all heart specialists. Electrodes are strapped on the patient—generally on an arm and a leg—and electrical impulses produced by heart beats are picked up and recorded. From the intensity and regularity of these impulses much can be learned about the heart's condition.

There is one major drawback to the standard electrocardiograph. It can be used only when the patient is at rest, usually lying down. Thus, all that it can record is the condition of the heart when no strain is placed upon it. It is impossible to obtain a comparative reading of the heart's actions during various degrees and kinds of bodily exercise

With the new broadcasting device, heart beat changes under almost any conditions of exertion can be determined. It consists of the electrodes and amplifier of the conventional electrocardiograph, a radio transmitter and batteries, all of which are worn by the patient. In addition, there is a radio receiver, amplifier, speaker and recorder, which are located in the doctor's laboratory.

The precision of this receiver is such that it picks up faint signals of a certain wave-length clearly in spite of any disturbing elements in the laboratory, such as electrical equipment, fluorescent lights and surrounding walls.

The messages received from the patient's heart can be heard through a high fidelity speaker, or can be written down on paper by a moving pen recorder.

It should be emphasized, say the Bethesda doctors, that the "noises" heard on the speaker are not the heart sounds that would be picked up with a stethoscope, but are electrical impulses transformed into sound. The net result, however, is a series of sounds very similar to those heard through a stethoscope.

The heart beats are heard as regularly spaced "thumps." The contraction of chest muscles also produces electrical discharges. These, however, are of a higher frequency than those associated with the heart beats. The sounds can be easily distinguished The chest muscle sounds are like the sounds of distant waves breaking on a shore.

With patients suffering from various heart conditions, the new device will probably be of considerable help in determining how much activity a patient may undertake without danger of heart strain. The degree of exertion often is critical. The heart may be able to force blood through hardened arteries with comparative ease when the patient is at rest. But as soon as he exercises, his oxygen intake increases and the heart has to pump harder.

By studying the "broadcasts," the Bethesda doctors believe it will be possible to tell a patient whether he can stay on his job, whether it is safe to go up and down stairs, or whether he must remain a semi-invalid.

Vaccine for Encephalitis

A JOHN Hopkins University scientist announced last week the discovery of a vaccine to protect man from several forms of encephalitis, which can be fatal

Dr. Winston H. Price, developer of the vaccine, says it is made from two strains of the "West Nile Virus," an organism which causes outbreaks of a minor illness in Egypt and adjacent areas.

Dr. Price said it is the first time that a single vaccine has been found that offers protection from several viruses that produce encephalitis, a brain infection that sometimes causes sleeping sickness and paralysis. Previously there have been no preventive measures for some of these illnesses.

The John Hopkins scientist said the new vaccine, although still in the experimental stage, has major implications for the health of the populations of Asia, Africa, the Mediterranean area and South America where outbreaks of encephalitis are common.

In addition to protecting from several kinds of encephalitis, the vaccine also prevents dengue fever which can sweep through a group and prostrate its victims with fever and fatigue.

Dr. Price recommends a continued search for a better strain of the West Nile Virus before the vaccine is adopted on a world-wide basis. He says, however, that tests on humans already have proved that the vaccine will work.

Improved Nylon Artery

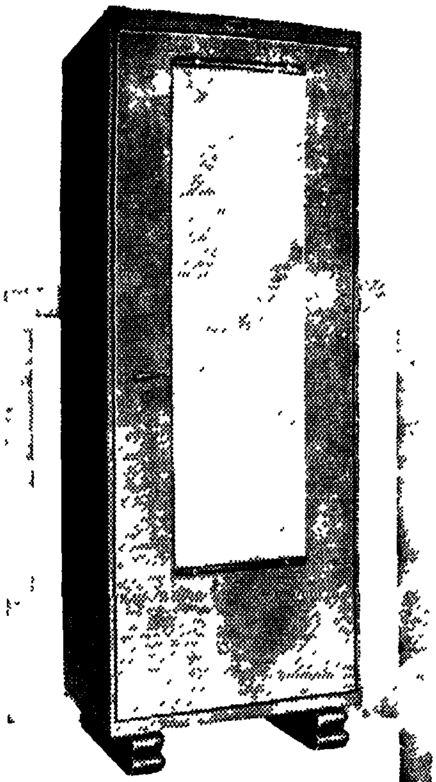
THE Chemstrand Corporation of New York has announced the successful development and medical use of a new nylon Y-shaped artery which replaces the vital human aorta where it branches to carry blood to the legs.

Today, less than eight months after the first medical meeting report on the nylon "aortic bifurcation graft," more than 200 people in the United States and other countries are walking testimonials to the success of the new replacement artery.

The new nylon Y graft artery was perfected by the same physician-scientist team that developed the original Chemstrand nylon "no-kink" artery announced in 1955. They are Dr. W. Sterling Edwards of the medical college of Alabama Surgery Department and Dr. James S. Tapp who heads the pioneering section of the Chemstrand research division

The Y graft artery is an outgrowth of the non-branching nylon "no-kink" artery which first took shape in Dr. Tapp's laboratory and was then tested extensively in animals and eventually used in human beings by Dr. Edwards.

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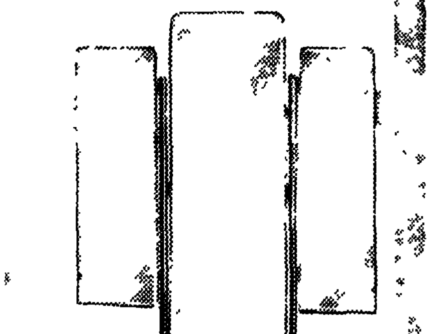
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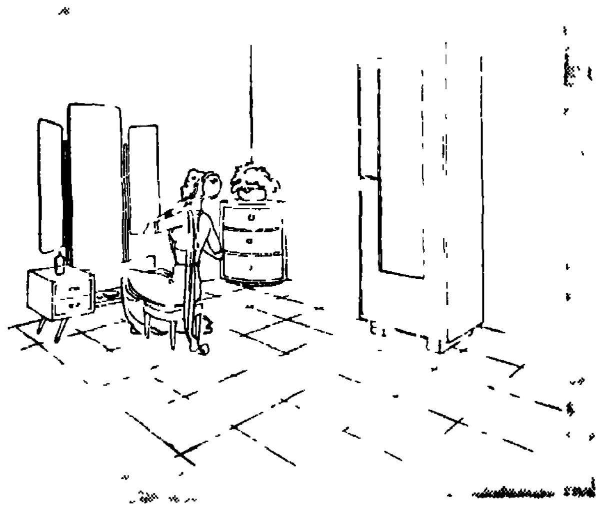
Three adjustable mirrors, two drawers Shelf and pedestal covered with black vitrolite glass bound with stainless steel border



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SA 57 1

WHAT TROUBLE DOES TO US

(Continued from p. 25.)

built up, just as money in the bank has to be accumulated.

Emotional weakness, like lack of muscle tone, results from failure to use body resources and to exercise control.

Some years ago a friend sat in my study and expressed her discouragement "I don't believe my attitude toward my husband's death is better than it was a year ago I'm ashamed of myself and the energy I spend brooding"

As we talked it became evident to both of us that she had done very little in the past year to add to her inner strength Like a lot of people, she counted on automatic improvement in her emotions without making an effort to increase her morale. The half-truth that time heals all things lulled her into waiting, when she should have been working her way toward new attitudes.

She was still interested in her appearance, and continued the physical exercises by which she kept her figure trim She had neglected the "exercises" that help reduce anxiety, gloom, and despair If she had filled her days with useful service for others or had assumed additional responsibilities, she would have regained her mental health more rapidly

She had visited several local service clubs, but had failed to take a vibrant interest in their activities She lived only three blocks from the church she had attended all her life But after her husband's death she no longer attended services

She often refused requests for volunteer service because she had a large house and garden to care for. Ordinarily household tasks and gardening are antidotes for gloom But they can be so tied up with self-interest that they only provide an opportunity for brooding over troubles.

As she later discovered, she was not a weak character. She had been using all the inner reserve of strength she possessed to defeat her loneliness, without doing any of the obvious, out-reaching things that everyone has to do to build up and replenish spent inner resources With sympathetic guidance she regained her confidence and mental tone

Most people who find that life has lost its zest after great trouble have much in common with this woman The years have brought me conviction that the majority of us who feel ourselves whipped by some circumstance, or who are whipped without recognizing it, will find in ourselves as much resiliency as this woman discovered *We need primarily to follow the simple pattern that restored her happiness: (1) to examine our* own response to the thing that has happened to us, seeking the help of a counsellor if necessary, (2) to look about for ways of dwarfing our own distress by lightening some one else's, (3) to find a place of worship where we may be regularly reminded of the Love that undergirds life and gives it purpose What trouble does to us is not determined by the strength of the *outside* pressures but by the strength of our *inside braces!*

Simply knowing about your inner fortifications will help you to find joy in solving your difficulties



Photo R Krishnan

Her courage and resourcefulness fell on my friend and me like a refreshing rainfall.



Watchman and
Herald of H
A Magazine for Home and Happiness
1957

The

Big Bad Wolf

A W. H. O. FEATURE

ON A hot August night last year a rabid wolf of exceptional size slunk into the sleeping village of Sehane on the road from Teheran to Damascus and Baghdad Travellers sleeping in the open spaces scrambled out of their beds screaming as the wolf made its mad rush, recklessly biting whoever came in its way in whatever part of the body happened to be closest to its poisonous fangs A total of 29 people and six cows had been bitten before the wolf was finally bludgeoned to death From peaceful sleep the village was thrown into a state of wild confusion But this tragic episode has become an important landmark in developing the techniques of rabies prevention and treatment

As long ago as 1950 the World Health Organization's Expert Committee on Rabies had taken cognizance of the fact that anti-rabies vaccine had been shown to be powerless in an appreciable proportion of patients bitten in the head by rabid animals, particularly wolves. It appeared that the antibodies introduced by the vaccine formed too slowly to be able to counteract the development of the rabies virus, if this was introduced by a bite too close to the nerve centres

Research in Teheran

The Expert Committee recommended further research, and Iran was chosen as the country for investigation because attacks on villagers by rabid wolves are frequent there At the Pasteur Institute, in Teheran, research was continued with anti-rabies serum of high antibody level, which had given encouraging results in the laboratory, and it was decided to carry out a field trial to determine the value of this serum when used in combination with the existing vaccine

The Sehane incident provided an excellent opportunity to test the new method of treatment and to demonstrate its effectiveness Some thirty hours after they had been bitten, the victims from Sehane were under treatment at the Institute in Teheran Eleven of them were found to have been bitten in the body or limbs, and eighteen in the head.



The eleven received a regular prophylatic course of vaccine and there were no deaths among them Of the eighteen with head or neck injuries, six received the regular course of vaccine and three of these died The remaining twelve received the combination of vaccine and serum, only one died

After Pasteur

The usefulness of the serum-plus-vaccine method has now been accepted by the Third WHO Expert Committee on Rabies which met at the Pasteur Institute in Paris recently

The meeting had historic implications since it was at this same Institute that Pasteur introduced rabies vaccination for human beings over seventy years ago, and the combined technique is one of the most notable advances in the prevention of rabies since that time

(Continued on p 36)

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Herald of Health

A Magazine for Home and Happiness

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ASSOCIATE EDITOR

J B OLIVER, M.D., D.T.M.
ASSOCIATE EDITOR

Contents

OUR COVER

Sweet May hath come to love us,
Flowers, trees, their blossoms don,
And through the blue heavens above us
The very clouds move on. —Heine

Photo B Ranganathan

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Minute Meditations

TYRANNY OF USELESS THINGS

H. M. Tippett

MOVING day! What sighs and fretfulness those words invoke. The piano, sofas, and chairs are no problem. But, oh, the attic, the basement, the garage—how will we sort out the unnecessary from the indispensable?

Some modern Solomon has observed, "There is no tyranny like the tyranny of useless things." Most people's lives are cluttered with an accumulation of trifles. The string savers of the world constitute a large fraternity. From small Johnny's trousers' pockets to mother's handbag, from storage room to bedroom closet, miscellany triumphs.

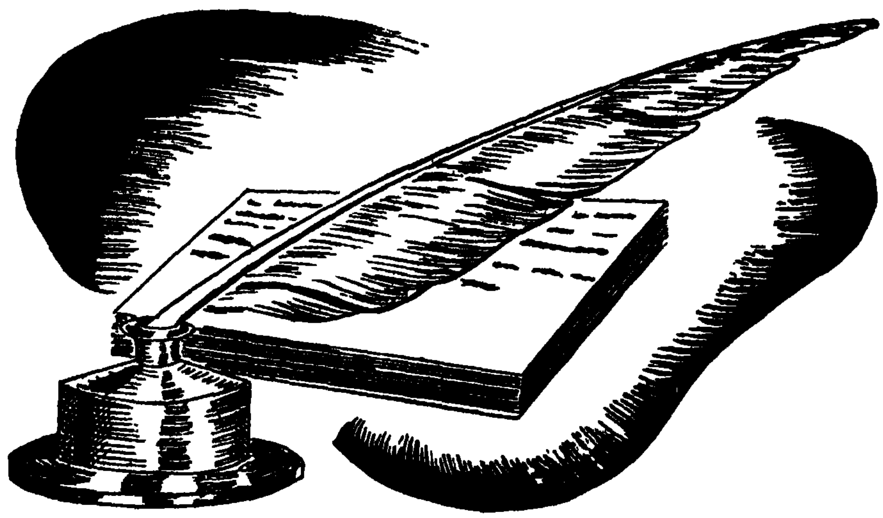
When filing things we often find
Odd bits extraneous—
We frown and toss them in the bin
Marked "Miscellaneous."

Why we cling to things that have outlived their usefulness or never served any purpose is a problem for the psychologists.

There may be an argument for the dust catchers in the parlour even though they engage the housewife in a wearying round of labour. Some of them may look pretty. But no one can find excuse for the stacks of old photographs in the trunk, the gilt portrait frames of the nineties hanging on nails in the basement, the sad-irons from the days of the coal range, and Grandfather's Army boots. Not even the most optimistic junkman would be interested. Yet we hoard these as pirates do their treasure trove.

To be engaged with trivia, whether of things or of thought, is a detriment to efficiency and

(Continued on p. 5.)



THE EDITOR ASKS

"NEED A LIFT?"

THE *Madras Mail* of March 11 published a short article under a Delhi date line of March 8, referring to the possibility of developing small industries to extract caffeine from tea waste.

This article was of interest to us, because it again points out some of the principles that this magazine has been maintaining for the last fory-eight years. We will quote the article as it appeared in the *Madras Mail.*

> **"New Delhi, March 8: A scheme for the manufacture of caffeine from tea waste has been prepared by the Small Industries Organisation of the Ministry of Commerce and Consumer Industries for the guidance of small industrialists. Caffeine is the main active constituent of tea and it is in very great demand for medical purposes, particularly in stimulating the heart and higher faculties of the human system. It is also an important diuretic. India's annual production of tea is over 600 million lb. Nearly three-quarters of the total production is exported, and the rest is utilised for meeting the internal demand. Side by side with quality products, a huge lot of tea leaves are left unused as tea waste, which is relatively cheaper and an important source of caffeine. Several attempts have been made to extract this alkaloid from tea waste on economic lines in competition to the synthetic product which is not imported."**

We recognize that caffeine, along with the other purines, may have a legitimate place in medicine, and inasmuch as it does have a medicinal value when used in treating the disorders for which it is valuable, we would feel that the suggestion made in the press release just quoted is one that is quite worthwhile. But we would like to go a step further and urge that *all* tea be utilized in that way rather than just the waste leaves! While we recognize that this attitude is a bit extreme, still we cannot but maintain our traditional attitude that the common use of tea as a drink is not beneficial to the human body, all propaganda and advertising to the contrary.

It is quite true that tea is capable of giving one "a lift" but it is also true that any habitual tea drinker can tell you that it takes more and more tea to give the same sort of "a lift" after a time. Any tea drinker who has become addicted to the use of tea, will also, if he is honest, admit that if his tea is not taken at regular times and in increasing quantity the system will exhibit early withdrawal symptoms and the craving will become quite intense.

Caffeine or theine is a purine discovered in 1820 by Ferdinand Runge. He discovered this substance in tea leaves. It is interesting to know that caffeine is found only in vegetable matter and occurs in the following proportions: 0.8-1.7 per cent in coffee beans, 0 1-0.8 per cent in cocoa beans, 1 0-2.0 per cent in Kola nuts, 2.0-5.0 per cent in tea leaves, and 2 5-5.0 per cent in guarana, the roasted fruit of *Paullinia* which is

MILK AND FRUIT JUICE

MILK has been successfully combined with fruit juice by some Dutch scientists, the United States Department of Agriculture reports. In their new milk drink, which combines acid fruit juices to make a colourful pasteurized drink, the scientists were able to pasteurize the food and keep it for several months.

Th secret to the combination is the substance pectin, which enables the milk to combine with the fruit acids. Pectin is used by every housewife when she makes jam or jelly, and its action in the milk and fruit combination is similar to the jelly-making result. The pectin throws a protective coat over the homogenized milk molecules.

Among the food flavourings that have been combined with milk are black currant juice, lemon, orange, and apple. This drink has been favourably received in Holland, and experimental work is being carried on at the Institute of Research on Storage and Processing of Horticultural Produce at Wageningen University.

eaten in South America. The *Encyclopædia Britannica* states that "it is this purine, along with the theobromine and theophylline, which gives the stimulating efficacy to drinks made from the above sources."

Before discussing caffeine let us go back and see just what the purines are, as that will help us to understand what caffeine actually is The term purines is given to a large group of nitrogenous compounds, a small number of which are found distributed widely throughout nature. They have been given the name purine, because of the fact that, chemically, they can be regarded as being derived from that one substance, purine itself. Emil Fischer, a German chemist, coined the name from two Latin words, *Puram* and *Uricum*. This latter word was chosen, because at the time Fischer announced his discovery, the best known purine was uric acid which occurs in urine.

Several hundred purines are now known, but only twelve have been isolated from natural sources. The others are all synthetic products and so far as our discussion is concerned are of only academic interest.

It may be of interest to some of our readers to know that uric acid, the first purine known, was discovered in human urinary calculi by a Swedish chemist in 1776. Some 30 years later it was found that uric acid occured in guano and later it was found that birds' excrement consists largely of uric acid. However, the best source of uric acid known is the excrement of serpents, which contains over 95 per cent of uric acid combined with a small amount of potassium ammonia.

Uric acid is the substance which is deposited in body tissues and causes painful swelling in cases of gout. It is the substance responsible for the formation of gouty nodules which lead to the inflammation and irritation which characterize the disease. Uric acid, of course, is normally found in the blood of man and other animals, but human blood normally contains less than 0.1 mg. per cubic centimetre. The kidneys are called upon to remove excess uric acid from the blood stream. The human eliminates 90 per cent of certain chemical constituents of his system in the form of uric acid.

In the human the uric acid which is excreted may be of two sources. One is nearly constant, about 0.4 gramme a day and comprises the uric acid which is formed in the body by the synthesis and break-down of nuclear tissues. If a person is living on a diet which is free from purines this amount of uric acid excreted is independent of the amount of fats, carbohydrates, proteins or the total of calories taken; and it is thought to originate in the muscles and other tissues of the body. The other source of the uric acid which is eliminated by the human body is formed by the oxidation of purines which are taken into the body as a part of the food, either in drink or chiefly in meat. It is interesting to note in this connection that all meat, particularly meat which is of a glandular nature, such as liver and sweetbreads contains amounts of nucleic acid in varying quantity, and nucleic acid contains about 20 per cent of the purines guanine and adenine. These substances are changed in the human body by means of certain chemicals into two other purines which are both oxidized to uric acid. The amount of this type of uric acid depends, then, on the intake of substances containing purines.

It is known, for example, that uric acid and another purine, if injected into the body, can be recovered in almost exactly the same quantity from the urine. Thus it should be evident to any intelligent person that while the body will normally be excreting 0.4 grammes of uric acid a day as a result of normal body processes, if a person lives on a diet which contains an excessive amount of purines he will thereby be placing an additional abnormal burden upon his organs of excretion.

It sometimes happens that because people have taken purines into their system excessively either through their drinks or through their foods, the metabolism processes of the body are disrupted. As the person so affected continues to take in more purines the result is that since they cannot be eliminated effectively any longer, they must be stored some place. In the early stages, this storing is in the blood.

(Continued on p. 7.)

Tyranny of Useless Things

(Continued from p. 3.)

creative achievement. Hidden anxieties sometimes develop from the nervous energy expended in concern over disposing of such things. Putting off decisions on what to do with such impediments is even worse than storing useless gadgets in the cellar. Such impounded decisions accumulate until they are a definite source of uneasiness and worry.

It has been said that order is heaven's first law, and when we think of the harmonious movement of the planets and satellites of God's universe in space it is not hard to believe that confusion and disorder are man-made. Each star serves its appointed use. No wonder the great astronomer Kepler gazed into the heavens and exclaimed, "I think Thy thoughts after Thee, O God." Should it not encourage us to clear up the confusion with which trivial concerns and treasured trash clutter our lives?

THE STUDENTS' GUIDE

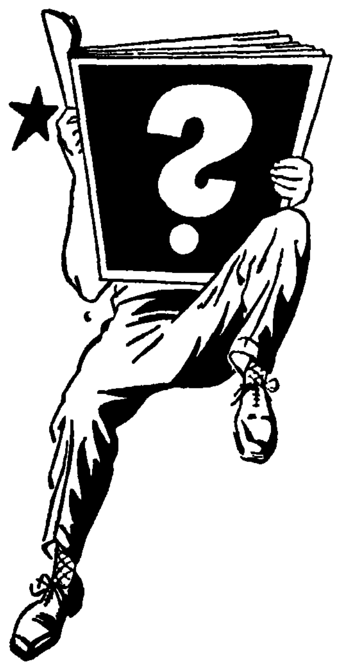
THE IMPORTANCE OF GOOD BOOKS

SAHIB SINGH AHUJA

THE need for good books and the right type of literature cannot be too strongly emphasised. Never was their need so keenly felt in our country as it is today. Books are our good friends and companions. Besides their educational, historical, reformative, religious and other values, they provide means for utilizing our leisure, enriching our knowledge and broadening our outlook. We can mould our characters in different patterns by reading different books. Good books give instructions and teach morals of l o v e, devotion, self-sacrifice, courage, friendship and duty; they broaden our sympathies, stimulate our taste for literature and excite our imaginative faculties.

Reading is the most innocent type of pleasure, if it is well-trained and well-directed; but flashy, silly and immoral books, magazines and papers corrupt the minds of our young people. Good reading admits us to the company of the noblest and the best minds of all ages. It is a lasting source of pleasure and delight and can be enjoyed both in company and in solitude. Pleasant descriptions of different scenes and sights fill our hearts with joy and afford us recreation after strenuous work.

We can always have some good book to read to divert our attention and help us relax at the end of a day of labour. The reading of light literature is highly entertaining. Good poetry, too, transports us into regions of joy. By reading good books "we take delight in weal and seek relief in woe." When we are in a happy mood, our joy is doubled by reading. In moments of depression and dejection, reading soothes and consoles our troubled souls. Good books elevate our character, and the morals contained therein purify and ennoble our thoughts and consequently give us infinite joy. Good books on religion uplift our souls to celestial heights and have the most reassuring and soothing effect on our troubled minds.



What book is it?

Students in our country, both boys and girls, today seem to be gripped by a love for books. Waiting in the queue at a bus stop or the cinema house, or when travelling in trains or buses one sees young people absorbed in books and magazines. Superficially this seems to be a happy state of affairs but one is shocked when one actually sees the sort of books and magazines in which the student community is taking its intellectual bath.

Cheap books, with accent on violence and sensuality, appealing to one's baser instincts, have been dumped on our book-stalls and are today eating as a cancer into the moral fibre of the rising generation. Young boys and girls are often seen avidly reading filthy and sexy literature in their class-rooms and in leisure time at the cost of their normal study-books and are thus subjecting themselves to incalculable harm both to their body and mind.

Most of the magazines that seem to be eagerly devoured by the students, are either film magazines, carrying fantastic stories about actresses, or other sensational publications which have a ready appeal to juvenile tastes. No wonder that the students in India know more about the beauties of the celluloid world than their next-door neighbour,—not to mention important national or international affairs.

But this is not the end of the story. There are other magazines dealing with true romances and true confessions, which are mostly imported from foreign countries resulting in sheer waste of the nation's hard-earned money. While the foreign publishers are minting money by trading in such sexy literature, our student community is being exposed to the dangers of juvenile perversities. Horror comics pale into insignificance when compared to these "true romance" stories.

There is also another type of foreign publication, cheap but attractively got up, filled with propaganda which may ultimately do vast damage to our national democratic structure.

These factors are primarily

sponsible for diverting the energies of our young people into improper and unconstructive channels. They fall an easy prey to bad company and a sort of vicious circle is thus created. Their visits to cinemas become more frequent. Due to dearth of good and educative films, they have, perforce, to see ordinary sexy films portraying "boy meets girl" stories. Their latent, premature instincts for sexuality are stirred and as a consequence the number of "street Romeos" and "Juliets" increases. Many young men take to abusing themselves, night pollutions become abnormal and the flower of manhood is wasted away. Gradual loss of eye-sight, continual headaches, loss of temper, depression in spirits, and morbid feelings become routine with them.

The need for ridding our bookstalls and bookshops of this type of literature is of paramount importance and the sooner it is realised the better it will be for the future of the country and our student community on whose shoulders rests the responsibility of building new India.

Some people have suggested that the publication and the import of such books and periodicals should be completely banned. But the remedy does not lie in a mere ban on such literature. We must place in the hands of the youth some alternative useful publications—books and magazines that would bring before their eyes the glorious past, that would acquaint them with the cultural heritage of India and the culture of other nations, and acquaint them with the lives of great men, thus to help mould them into useful citizens of the country.

To achieve this a great measure of responsibility should be borne by our writers, whose task it is, as Shri Radhakrishnan has said, "to clear the mists of misunderstanding and to give our world, which is shrill and sharp, a friendly countenance and character." Only writers able to distinguish the true from the false and to understand the cause of the many social ills that afflict us today would be able to face the task with effective help and encouragement from the government and other leaders.

The leaders, the parents, the teachers and the taught, all seem to be equally responsible for this sad state of affairs. To improve the situation, a frontal attack on the factors responsible is needed What our young people today need in this respect is proper direction and guidance. It is heartening to note that our Government has taken serious notice of the situation and has recently passed an enactment on the pattern of that passed in the U K., imposing a ban on horror comics and cheap literature. A National Trust for arranging for the wholesale and cheap publication of the right type of books is in the offing. It is to be hoped that with the active collaboration of all concerned, the efforts of Government and others will be crowned with success in eradicating the menace completely.

THE EDITOR ASKS "Need a Lift?"

(Continued from p 5.)

Naturally, it is from the blood that the kidneys eliminate the purines. As the kidneys are no longer functioning properly in this individual, and because the blood can only hold a certain amount, the excess is deposited mainly in the cartilages and joints, in the form of acid sodium urate. This substance produces an irritation. This irritation produces a diseased condition commonly called gout.

It should be obvious that since gout is actually caused by an excessive amount of purines in the system, a person suffering from such a disorder should avoid foods and drinks which contain purines. Meat, particularly, should be avoided. Such a person should take as his protein diet only such foods as milk and eggs which are virtually purine free In other words, he should not be placing upon his own kidneys the burden of eliminating the waste products which will be contained in the meat of the animal which he has eaten,—wastes which would normally have been removed by the kidneys of the animal. It should also be just as evident that the use of drinks which contain caffeine, which is one of the purines, would also be detrimental to the human system.

Our readers have noted that in the years we have been publishing our journal we have consistently advocated the non-use of pork. One reason for this is that the organs of the pig are so constructed that they do not eliminate much of the uric acid from the system of the animal As compared with the human which eliminates 90 per cent, the pig eliminates only 1.8 per cent. Thus the pig frequently suffers from a type of gout which is similar in all respects to that of the human, except that the deposit in the joints consists of crystalline guanine instead of acid sodium urate as in the human Obviously, then, when a person makes use of pork he is increasing the quantity of purines which is taken into his body and therefore he is placing a much greater strain upon his kidneys than they would be forced to bear normally.

Caffeine, one of the purines, has the effect, when taken into the body, of stimulating the central nervous system. There are times when this is of vital importance medically and in such a case, where

(Continued on p. 32.)

Please give me advice on losing weight.

REDUCING

LUCILLE J. GOTHAM

THERE are at least twenty-five million over-weight people in the United States. Frightening but true statements are being made by authorities about the dangers of excessive weight. You have heard the statement, "The longer your waistline, the shorter your life line." This scientific observation was made by a leading doctor: "Over-weight persons on the average die younger, and more of them develop diabetes, cancer, heart, and kidney diseases, arthritis, other joint disturbances and high blood pressure, than persons of desirable weight."

Usually it is either doctor's orders or pride that leads a person to make the effort to reduce. Here are some suggestions and warnings about weight loss. All reducing measures should be talked over with your doctor.

1. Steam baths give a temporary lowering of the weight. But they may be harmful for a person with a weak heart or high blood pressure.

2. Massage is agreeble but quite valueless so far as actual loss of pounds goes. However, in connection with diet measures it may make for beautiful body symmetry.

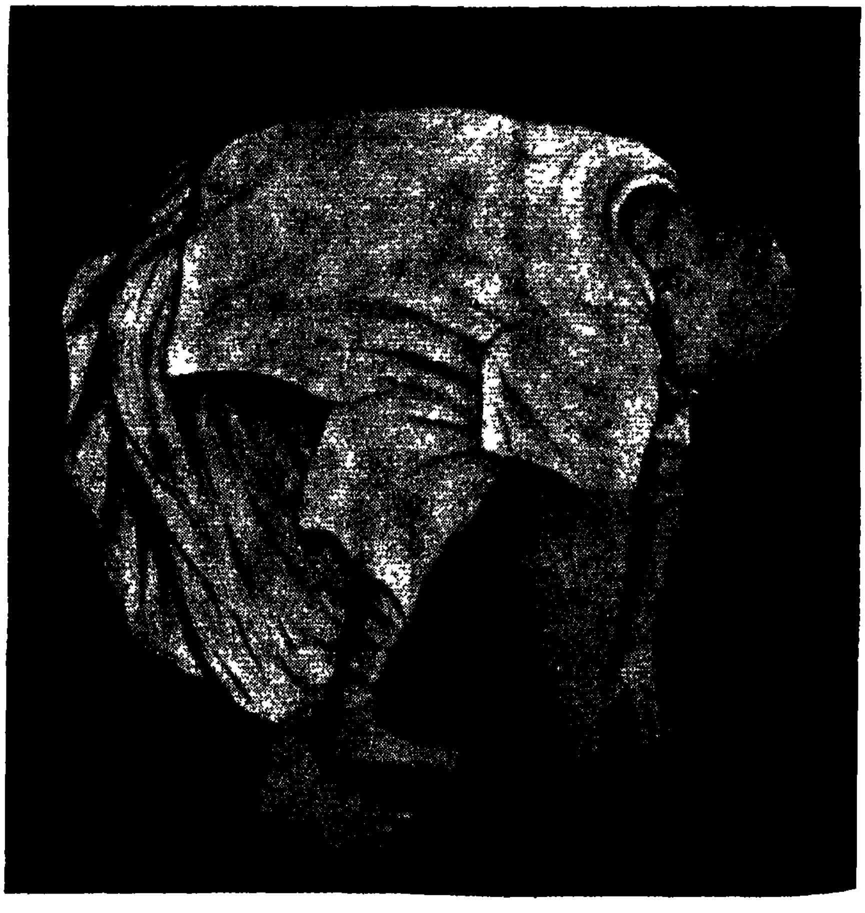
3. The use of cathartics may have harmful effects.

4. Cutting salt from the diet generally produces a sudden, dramatic loss of several pounds. As a rule it is beneficial to cut salt, for reduction in salt intake tends to correct a puffy, water-logged condition that troubles many over-weights. Ask your doctor how much salt you should use.

5. Reducing medicines are used only in certain cases under a doctor's careful guidance. Opinion varies as to their usefulness and safety. Some of them act by curbing the appetite.

6. Fasting may be practised in many ways, but prolonged fasting is never recommended. Some people take only liquids one day each week. Others eat no supper, and have better health for this measure. Still others take no food for two or three days to lose five pounds or so.

7. Excessive exercise may produce a lowering of body weight to the extent of as much as five pounds. This is illustrated by the



"The longer your waistline, the shorter your life line."

athlete who may weigh five pounds less when he comes from the field. This reduction is largely a loss of water from great perspiration, and the weight is gained back as soon as the thirst is fully quenched. In general, moderate exercise is beneficial to the reducer, for it makes the flesh firm and helps produce a well-proportioned figure.

8. The best reducing method is to follow a sensible reducing diet rigidly. This diet should supply the essential food elements. When followed properly it brings the weight down gradually but surely.

Every reducer should possess a bathroom scale, a tape measure, an easy-to-follow diet, and lots of will power. For the greatest encouragement it is best to weigh the first thing in the morning. This is probably the truest weight. If the scales point to a discouraging figure, start at once to curb the calories Keep a record of your weight and food intake every day if you can spare the time. Once a week record your waist and hip measurements. These methods help to keep you at your task.

Visit your doctor, and with his approval and diet list start right in and show him what you can do.

It will not be expensive to follow a reducing diet, but rather a saving. You easily may be able to cut your food budget enough to purchase a pretty new dress—a size or two smaller than you bought the last time you shopped.

Reducing diets vary from strict emergency rations, which may be as low as 600 calories, to the usual standard diets of 800 to 1,500 calories The correct number of calories for you will vary with your build, activity, the weather, and other factors. Your doctor may say, "Eat 1,000 calories daily for the next two weeks," but may have little time to discuss ways for making the diet varied and enjoyable.

When the calories are limited it is safest to make every one count for health. The calories should be made up of measured amounts of fruits, vegetables, whole-grain bread, cereal, and dairy products. These are called protective foods, because they will help preserve the teeth, nerves, and morale while you are losing the unwanted weight. Keep vitamin and mineral capsules in an attractive dish on the table, and use them faithfully while on the restricted diet, as a safe-guard to health.

Every reducer is interested in securing definite menus and recipes, and is usually seeking something tasty and filling. If a dieter eats the same foods every day, the monotony will help cause him to break over and fail in his plans. Variety makes for superior health. In order that he may have variety, we give menus for three days and a list of fruits and vegetables that may be used as they come in season. You may cut these menus or add a bit according to your special needs.

1,000-CALORIE REDUCING MENUS

300-Calorie Breakfasts

¼ cantaloupe
½ cup bran
1 cup skim milk
1 slice whole-wheat toast
1 teaspoon butter

½ cup pineapple juice
½ cup puffed rice
1 cup skim milk
½ slice whole-wheat toast
1 egg

1 medium orange
½ cup cornflakes
1 cup skim milk
1 slice toast
½ teaspoon butter

400-Calorie Dinners

2 broiled gluten steaks
½ cup snap beans
Tossed green salad
1 peach
1 cup skim milk

1 stuffed egg, lettuce
Asparagus on toast
1 cup skim milk
1 cooky—macaroon

½ cup cottage cheese
1 potato
½ cup stewed tomatoes
½ cup carrots, parsley
1 cup skim milk

300-Calorie Suppers

1 sliced tomato
1 egg sandwich
1 cup skim milk

1 cup tomato soup
Large vegetable salad with a hard-cooked egg
1 slice whole-wheat toast

1 poached egg on spinach with lemon
1 apple
1 cup skim milk

Alternatives for the orange at breakfast: ½ medium apple, ½ cup applesauce, 2 fresh apricots, ¾ cup canned apricots (water pack), ½ small banana, ¾ cup fresh blackberries, 1 cup blackberries (water pack), ¾ cup blackberry juice, ⅓ cup fresh blueberries, ¼ cantaloupe if large or ½ if small, 14 fresh cherries, 1 small fig, 1 cup gooseberries, ½ grapefruit, ½ cup grapefruit juice. Small bunch of grapes, ¼ cup grape juice, ⅓ cup huckleberries, ½ cup lemon juice, ¾ cup lime juice, ½ cup kumquats, ½ cup loquats, ⅓ cup mangoes, ½ cup mulberries, ½ cup orange juice, ¾ cup papaya, 1 medium peach, ½ medium pear, 2 slices pineapple, ¼ cup pomegranate, 2 plums, ½ cup raspberries, 1 cup strawberries, and 1 slice watermelon size 1¼ dinner plate and 1 inch thick.

Alternatives for stewed tomatoes: ½ cup asparagus, ½ cup bean sprouts, ½ cup beet greens, ½ cup cabbage, ½ cup cauliflower, ½ cup celery, ½ cup cucumber, ¼ head lettuce, ½ cup mustard greens, ½ cup radishes, ½ cup rhubarb, ½ cup sauerkraut, ½ cup spinach, ½ cup squash, 1 medium tomato fresh, ¼ cup tomatoes canned, ½ cup tomato juice, ½ cup turnip tops, ½ cup watercress.

Alternatives for snap beans· ½ cup egg-plant (brinjal), ½ cup okra, 1 medium pepper, ½ cup pumpkin, ½ cup green soy beans, ½ cup squash, ½ cup turnips.

Alternatives for carrots: ½ cup beets, ⅓ cup peas, ½ cup onions, ½ cup Brussels sprouts, ⅓ cup green Lima beans.

Alternatives for potato: ½ cup corn, ½ cup baked beans, ½ cup cooked rice, ½ cup cooked macaroni, spaghetti, noodles, or vermicelli.

Don't Rush Yourself to Death

DOROTHY GRAY SMITH

You actually harm yourself by hurrying through daily duties.

"HURRY, dear, hurry!" Mother called for the third time, "dinner is ready now." And Jane did just that. She climbed out of the shower, wrapped a big towel around her, and raced for the bedroom to dress. But she didn't quite make it. As she reached the door she slipped and fell. Her right leg hit the bed rail and buckled back. There she lay, grimacing in pain, her right ankle broken. Jane didn't eat dinner that night and neither did Mother. If she had waited until after dinner to shower, or Mother had not been so insistent about her rushing, the accident would not have happened.

"Hurry, hurry!" is the scourge of modern civilization. It is nothing short of a demon with a pitchfork, constantly prodding until our minds become confused and we develop nervous tension. We become more concerned with hurrying than with doing a thorough, careful job. The result is inevitably disaster.

There was Ellen, an efficient secretary. Her boss patted her on the back with one hand while he crammed volumes of work at her with the other. She was a conscientious worker, but her days were filled with, "How soon can I have that contract? This letter and all attachments have to go out tonight. Can I have the estimates in half an hour? The meeting starts in fifteen minutes. Can you type these data sheets?"

The pressure went on, month after month, until Ellen was in a whirl, and something in the back of her head kept beating "Hurry, hurry, hurry" day and night. She couldn't stop it. It became like a great hammer, and she could stand it no longer.

One day when her boss hurried her, something in Ellen's mind snapped, "Hurry, hurry, hurry," she cried, and began sobbing violently and uncontrollably.

The boss has a new secretary, and Ellen is slowly recuperating from her nervous break-down. If only she hadn't permitted herself to be hurried and pushed, if only she had set her foot down in the beginning and said, "I'm perfectly willing to work consistently, but I refuse to be constantly rushed." Unfortunately Ellen, like so many others, had to learn the hard way—through experience.

Many a secretary starts her day

(Continued on p. 29.)

HOW TO RELAX

In his new book *Relax and Live* (Prentice-Hall, New York 11, N. Y.), Joseph A. Kennedy, a physical instructor, gives his secret for erasing unconscious tension, which most of us have in this modern age. His three-step formula for relaxation is:

"1. Recognize tension, and learn to reduce it simply by stopping what you're doing to cause it.

"2. Slow up the breathing cycle.

"3. Cut down on mental imagery."

His first step is contract muscles and then relax them, to get the feeling of relaxation. Stretching brings muscles to a peak of contraction, for the relaxation can be felt and experienced as the muscles begin to let go after the stretch. Muscles relax only after you have taken your tension from them, and they continue to let go for some time thereafter. So during practice periods, you first contract muscles, then let them go, and let them continue relaxing.

By slowing up your breathing cycle, you cut down on the amount of oxygen going to the brain, and thus help reduce tension.

To reduce mental imagery, Mr. Kennedy suggests thinking about something black, because you must think of something at all times. Your brain cannot be a vacuum except during hours of sleep. So he suggests looking at a black letter, black coal, or black velvet drapes, to get the picture of blanking out your brain. This three-step formula he suggests as a going-to-sleep routine at night.

TO FEED YOUR BABY THE FIRST YEAR

Variety is the *foundation* of good nutrition. Every day your baby should have some food from each of the Basic 7 Food Groups below. Timing and quantity of new foods depend on the individual baby and his doctor's recommendations.

TIME TO ADD	GROUP 1 Leafy, Green and Yellow Vegetables	GROUP 2 Citrus Fruits Tomatoes	GROUP 3 Potatoes and Other Vegetables and Fruits	GROUP 4 Milk, Cheese	GROUP 5 Eggs	GROUP 6 Bread, Flour and Whole-Grain or Enriched Cereals	
1 TO 5 MONTHS	Strained carrots, peas, spinach, green beans, sweet potatoes, squash	Orange juice Tomato juice (for vitamin C)	Strained vegetable soup, mixed vegetables, beet roots. Strained fruits, such as apple-sauce, apricots, peaches, pears, bananas, prunes, papaya.	Milk formula Milk	Egg yolk—hard boiled and put through a strainer.	Cereals cooked at home and strained—oatmeal, wheat, corn, barley, rice.	Fish-liver (for Vit
5 TO 10 MONTHS	Chopped carrots, spinach, green beans, squash, sweet potatoes	Stewed tomatoes, fresh or canned, strained to remove seeds. Grapefruit juice	Baked potato Chopped mixed vegetables Baked apple, pear, banana.	Milk soups, flavoured with vegetables. Simple milk desserts—rennet, custards, cornstarch puddings, Cottage cheese Limit sweet foods.	Egg yolk—hard boiled and put through a strainer.	Zwieback Dry toast, whole grain. Milk toast, Semolina Arrowroot biscuits Graham crackers	A little butter or margarine
10 TO 12 MONTHS	Finely shredded salad greens Grated raw carrots	Broiled tomatoes Sliced orange Lemonade (weak)	Boiled or mashed potatoes, sweet potatoes, lima beans. Fruit juices	Buttermilk, milk shakes, gelatine, tapioca and rice puddings made with milk Mild cheeses	Whole egg, boiled or poached.	Bread, whole wheat or enriched Noodles, spaghetti, macaroni, rice.	Butter or margarine in slightly larger amounts.

Are You REALLY Sick

SUE THOMPSON GOULD, M.D.

ARE you really sick, or do you only think you are? Of course you never actually ask a patient that question. But the *doctor must never altogether forget it in his dual role of physician and counsellor. Not all ailments respond to surgery and medicine, no, not even to the magic of the wonder drugs.* The practice of medicine obligates the physician to make a sympathetic, persevering effort to treat patients whose main trouble is an abnormal habit of thinking.

The doctor, especially the surgeon, must earnestly ponder the question "Are you sick, or do you only think you are?" to arrive at the correct diagnosis. At the Mayo clinic the records of 235 patients were studied six years after the diagnosis of chronic nervous exhaustion was made. The diagnosis proved ninty-four per cent accurate, yet 289 separate operations had been performed on 200 of the group.

The whole personality of the patient must be appraised by the doctor. His business, social, and home life must be studied for evidence of dissatisfaction. Failure to adjust to environment may be revealed by a disturbance in some part of the personality, and it may be manifested as apparent bodily ailments. They may imitate any disease.

As a disturbance of the emotions they may be manifested in anxiety, obsession, phobia, depression, and other moods. If there is no outlet, no escape for the emotional energy produced, the patient may develop ailments in which his "organic voice speaks," and in which his emotional tensions are disposed of. With extreme emotional tension there may be sighing respiration, a feeling of oppression in the chest, or a "talking out" regarding the worry, which at least removes some of the load from the patient's chest.

Many people, to use the old phrase, are forever doctoring. When you ask such a person what is wrong, he complains fearfully, "My doctor can't find out." You ask him where he hurts. Says he, "Sometimes one place, sometimes another."

Perhaps he has responsibilities that are too heavy for him. Perhaps he takes the world's cares as his. Abraham Lincoln is said to have had periods of depression when he sensed his responsibilities too keenly. Charles Darwin, accomplishing the work of many men in many avenues, was always doctoring. For what? No organic trouble could be found.

Can it be that apprehension does cause illness for which no physical lesion can be discerned? Can it be



Photo: R. Krishnan

Are you really sick, or do you only think you are?

that certain scientists, psychologists, and others study themselves as well is their specialty too seriously? Do they perhaps forget that the human body possesses much resiliency and can compensate for minor ills and aches? That one need not despair?

It is evident that mental causes become replaced by physical and biochemical causes, by reflex or allergic causes. Different personality types are associated with certain diseases.

Consider the personality traits connected with asthma, one of the graver diseases without definite organic basis. Some scientists distinguish various types of persons among asthmatics. Others emphasize such sets of character traits as neatness and punctuality, obstinacy and ambition, irritability and optimism.

In the asthmatic there is a generally known relation between mind and breath, also between emotions and respiration. Some think that the mental factor is secondary in asthma, and that the disease is therefore not decreased by psychotherapy. Others think that the mental is the primary reason for the asthmatic attack, with the symptoms as the manifestations of anxiety and nervous irritability. They believe that the asthma symptoms serve as a protest, an evasion, or an escape.

A study of the mind versus allergy or other physical defect shows the following groups of symptoms that may be called allergic, or lacking an organic basis.

Symptoms related to the digestive system:

1. Nausea may be present without apparent physical cause.

2. Loss of appetite may be a symptom. The mal-nourished may be emotionally as well as physically starved. Fatigue may be caused by an emotional conflict using up the patient's energy.

3. Symptoms referable to the abdomen—indigestion, heartburn, constipation, and even vomiting—may be the result of nervousness, fatigue, and anxiety.

4. Obesity, in many cases, appears to be the result of eating in order to satisfy personal mal-adjustments.

Symptoms related to the circulatory system:

1. Heart neurosis and heart pain may be present where there is no organic heart defect. The patient considers the heart the seat of the emotions, and fixes it as the location of his anxiety. He associates the heart with sudden death. Ask the tense patient whether he has had a nervous break-down. He may insert "heart trouble" in his history if the word *heart* is so much as mentioned. His symptoms may include some of the physical indications of organic heart trouble such as fatigue, sighing respiration, nervousness, sleeplessness, flushes, and irritability.

2. High blood pressure may have a neurotic or mind basis. There may be seen a condition in which the symptoms of high blood pressure disappear but the blood pressure remains constant.

Symptoms related to the respiratory system:

1. We have already mentioned respiratory system symptoms, especially bronchial asthma. Night attacks may be preceded by an anxiety dream.

Of fifty cases of bronchial asthma studied in one clinical survey, thirty-seven apparently had an emotional component in the attacks. Thirty of the cases showed other neurotic traits.

2. Even too frequent colds and spells of sore throats may be due to being baffled in one's desires. The doctor must use insight into the unconsious demands of the patient on those around him, and try to detect in what ways his wishes are being thwarted.

3. Fear of tuberculosis or other

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MENTAL TEST

PSYCHIATRISTS now have a special test they use in some fifty clinics round the country to tell whether a patient will respond to treatment. It is a test that finds personality defects and measures "ego strength," which is something like "horse sense."

The test was developd by Dr. Frank X. Barron, associate research psychologist at the University of California Institute of Personality Assessment, and consists of sixty-eight questions. It was tried on infantrymen in the front lines in Korea in 1953.

Interestingly enough, Dr. Barron found that forty per cent of the men in battle would not return fire. His test was successful in distinguishing these men—the non-fighters.

A non-fighter's deficiency apparently is ego strength, according to Dr. Barron. A person with a lot of ego strength is usually in good health, has a strong sense of reality, plenty of self-confidence, and vitality. He is liberal minded, enjoys people, and is usually intelligent.

Psycho-neurotics have the qualities of a strong ego strength, but they may be masked by personality defects and distress patterns. Patients with a high ego strength usually respond favourably to psychotherapy.



Photo G Ramamurthy

Why should parents, friends, and relatives worry over such obvious pleasure as thumb-sucking?

Thumb-sucking

KATHRYN L. HAGEN, M.D.

ONE of the sweetest pictures I have ever seen was of a baby sucking his thumb. He was utterly relaxed, full of happiness, and content. Why should parents, friends, and relatives worry over such obvious pleasure? The fact is that many of them do.

You really have reason for your concern considering all the information passed down through the ages about thumb-sucking. But your family doctor now has good news for you. Medical science is ever trying to find the right and true answers for parents who are beset by tales, old fables, and well-meant advice on how to bring up their children.

Thumb-sucking at one time was thought to cause ill effects of one kind or another. It was thought to cause malformation of the jaw and protruding teeth. It has been associated with masturbation. It has been blamed for air swallowing, infection of the mouth, and stomach and intestinal upsets.

Doctors pass on to you the following facts. A normal baby is born with four feeding reflexes—rooting, sucking, swallowing, and satiety. The vomiting reflex may be included with the four.

The sucking desire remains strong for varying lengths of time, but ordinarily diminishes toward the end of the first year. Some babies are satisfied with the sucking required to provide food; others apparently need much more. Those who need more resort to fingers, thumb, pacifier, or other objects. As a rule there are movements associated with thumb-sucking. They may be rubbing, picking, or twisting of some part of the body or some object such as a blanket.

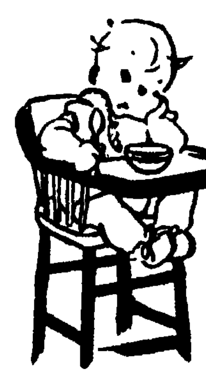
The mouth, which is the infant's source of first recognized pleasure, remains a source of pleasure to him throughout life. He takes up nail-biting, gum-chewing, or both in turn. Later in life, munching or kissing replaces the earlier pleasures.

Tongue-sucking is similar to thumb-sucking. It is more often indulged in by infants with a large tongue or the mentally retarded. A normal infant may suck his tongue for no apparent reason. Glandular deficiency or brain injury are commonly the cause of mental retardation.

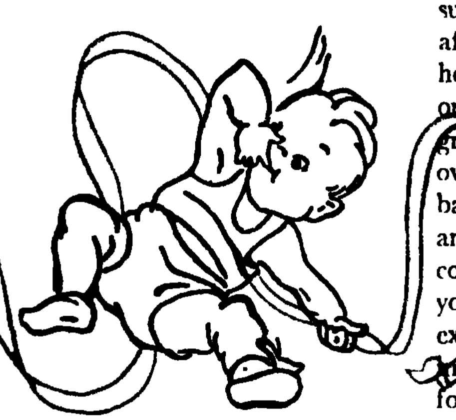
Our conclusion is something like a sad story with a happy ending. We have worried unduly over most thumb-suckers.

All kinds of devices have been used to put a stop to thumb-sucking—bitter-tasting substances applied to the thumb, taping, slapping, snapping, metal restraints to prevent elbow bending, and probably many others. They sound rather cruel in the light of present information. But let us have no recriminations or guilty consciences for honest effort to prevent what we thought to be harmful. Let us simply go on from here, following our enlightened way. True, thumb-sucking may displace the teeth, the thumb may become calloused or even infected; but beyond that there are no known harmful effects. It does not cause deformity of the jaw, infections, and stomach or intestinal diseases. Babies who do not suck their thumbs do as much air swallowing as those who suck their thumbs.

As to the relation between thumb-sucking and masturbation, they are both habitual manipulations of some part of the body, nothing more. There is no more tendency for a thumb-sucker to masturbate later in life than for a non-thumb-sucker.



Drs. Ruth and Harry Bakwin, after years of compiling information on the clinical management of behaviour problems in children, say, "Thumb-sucking can displace teeth, but it does not seem to affect the molar relationship. Although it may affect children with an underlying poor bite, it has little or no significance in children who have good bites. During the eruption of the deciduous teeth, the urge to bite is physiological and part of the oral development. It should not be interfered with. Children can be helped to stop thumb-sucking when they are physiologically and psychologically ready. Parental



influence may result in entrenching thumb-sucking, increasing the length of time and force, and consequently increasing the degree of malformation."

A most interesting little person was a boy who had sucked his thumb all his seven years. He was sick, and I was called to see him. He had been alone until two the night before, and was alone when I arrived.

"Mother went to the show last



night and missed the last bus home She's shopping now," he remarked.

We had quite a chat. As I was leaving he said, "You know, Dr Hagen, I'm not going to suck my thumb any more. I'm growing up."

My little friend outgrew the need of that pleasure or comfort in just one night.

Should you have a little one who sucks his thumb during the day after his first or second year of life, he is probably over-tired, unhappy, or even bored with his daily programme. Ask your doctor to go over your schedule; check your baby to be certain that he is well and his diet and activities are correct. You may need help with your own attitudes. Nervousness, excitability, or a tense personality in the mother may need correction for the child's sake.

Occasionally thumb-sucking goes beyond the age of five or six years. Rewards, appeal to his vanity, or helping the child help himself are very gratifying as a rule. There are those who do not approve of rewards. We must try to take the middle of the road Children are individuals and should be treated as such. Our training of them should be flexible, according to their personalities and individual requirements.

(Continued on p. 29.)

Much ado about thumb-sucking is more of a harm to children than the act itself.

The Miracle of Man's Bones

ANTHONY AKKARA, B.A.

IN A mountain cave in South China a few months ago, Dr. Pei Wen Chung of the Chinese Academy of Sciences discovered a human skull and parts of the upper jaw, the tenacious remains of a contemporary of the Peking Man which he believes to be 5,00,000 year old. Bones, similarly old, have been found in the past, in Neanderthal, Heidelberg, Java, and doubtfully in Piltdown. Such discoveries are bound to occur in future also because bones, besides being noted for their abundance and miraclous workings, are unique for their marvellous durability

The bone is stronger than the oak. It can withstand a tremendous strain which an iron beam several times its weight and size cannot, without breaking And yet it has a singular kind of elasticity which enabled primitive men to use bones for making bows. The bone does not dissolve in water, and so it can outlast iron and other metals which are affected by dampness. Such qualities of durability make bones survive the wear and tear of the ages and come to us as heralds of our ancestors.

Yet, these qualities are only the bare essentials for human bones. If they were not hard and tough, the human body would find it difficult even to resist atmospheric pressure. If they had no elasticity, the most ordinary bending, turning, twisting, kicking, or lifting would do instant harm to them, making one's body a mass of splintered bones in a matter of days. If they were affected by dampness, man would have no bones at all since they would dissolve in the body fluids before they took shape.

The bone's contents are simple: sixty-nine per cent of calcium salts and about thirty-one per cent of a *pasty,* organic matter. These together form a rare combination of hardness, toughness and elasticity

The limb bones, especially the femur or thigh bone, are engineering marvels. They are constructed to give the greatest strength and elasticity but *with lightness of material.* The thigh bone is a hollow cylindrical pillar placed upon the two thinner ones of the lower leg. All are constructed on the engineering principle that the greatest strength is obtained by using the least material or, in other words, by using hollow cylinders

Look at the spinal column. No creature on earth has got such an axis, a phenomenon in itself. It is responsible for man's erect posture, which is a thing of awe to animals several times the size of man Hunters have often reminisced that

ARTHRITIS—A KILLER OF CHILDREN

CONTRARY to popular belief, arthritis is a disease of childhood as well as of middle age.

There are more than 10,104,000 persons in the United States suffering from arthritis, according to the Arthritis and Rheumatism Foundation.

Recent studies at several leading medical centres show that about five per cent of all persons with rheumatoid arthritis, the most crippling form of the disease, are children.

The studies indicate that children who come down with arthritis are more severely affected than adults. For example, not only are arthritic children subject to repeated attacks of the disease that may last from many months to several years, but twenty per cent of the children who are stricken with arthritis die prematurely as a result of the disease.

Your contribution goes to support patient care and rehabilitation. Physicians have found that early diagnosis and prompt treatment are the most effective means of helping stem the tide of the crippling disease.



the fiercest tiger is afraid to attack a man standing erect. No doubt, man's spinal column helps him to be the lord of all earthly creation.

The spinal column of vertebræ is closely cemented together by the cartilages between them, and protects the vital spinal cord running through the ring-like centre of each vertebra. Still, this does not make the spinal column as rigid as a pillar. It is flexible and capable of a variety of movements.

The abundance of bones in ancient remains is partly due to their abundance in the human body itself. A *normal body contains* 203 bones, of which only three-fourths are apparent Just look at or feel over various parts of your body One can quickly spot nineteen bones each in the palms and the feet, two each in the forearms and lower legs, and one each in the upper arms and thighs. One can likewise find the collar and shoulder bones, the two lowermost "floating ribs" (not attached to the breast-bone) on each side of the abdomen, and also the three "pseudo ribs" above them, but it is not easy to count the seven true ribs connected to the breast-bone to form the chest

In the spinal column, the seven vertebræ in the neck and twelve dorsal ones below are counted easily. The remaining fourteen, and especially five forming the pubes and the four at the tail-end of the spine are buried deep in the lumbar region.

As people grow older some of their bones lose the cartilage between them and become fused together. Thus the four vertebræ of the tail-end become one, as also the five pubical and the three of the haunches; only three remain in place of twelve The old often have bones sticking out all over to suggest to the contrary, but the truth is that children have more bones.

There are fifty-two bones that

(Continued on p. 21.)

Experimental Insanity

LILLIAN POMPIAN

From *Today's Health*

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IN THE spring of 1943 Dr. Albert Hofmann, a swiss chemist, was overcome by peculiar mental sensations while working in his laboratory. He felt dizzy, restless, disembodied and unable to concentrate on his work. In a dreamlike state he left the laboratory and went home to bed where he found he was in "a not unpleasant state of intoxication characterised by an extremely stimulating series of fantasies."

Correctly connecting his disturbance with the chemical he had been preparing, Dr. Hofmann conscientiously recorded every sensation. "An intensive, kaleidoscopic play of colours acted upon me," he wrote in his journal. "When I closed my eyes, I was surrounded by fantastic images in sharp relief and of extraordinary plasticity."

These strange sensations had struck Dr. Hofmann after merely inhaling a whiff of the chemical. The next day he took a tiny quantity of the substance by mouth. The effects were so startling that his alarmed associates hurriedly called in a physician. "Faces around me appeared like coloured masks," he reported. "I watched with objective detachment while I yelled as if I were half mad and babbled incoherently. Everything seemed to reel. Audible sensations were transformed into vibrant, visual ones With every new sound, a new coloured image was released.

The chemical that so affected Hofmann was a derivative from ergot, a fungus that grows on rye It had been known for centuries that eating bread of fungus-infected grain would affect the brain and cause a crazed illness, epidemics of which have driven whole populaces mad in Europe and the United States. But here, for the first time in a laboratory, Hofmann had succeeded in forming a synthetic derivative which was called LSD.

Other chemists and laboratory workers immediately offered themselves as human guinea pigs so that the usefulness of this amazing chemical might be investigated. In the past five years scores of research volunteers at leading American institutions have stepped across the threshhold into temporary insanity.

Sane people drink a glass of water with a small amount of LSD in it, and, after a variable period, begin to lose touch with their identity and environment. They become so hallucinated and delu-

RECIPE FOR PEACE OF MIND

Louise M. Brown, R.N.

Spiritual Ingredients:

Grace enough to acknowledge and forsake our sins.

Patience enough to continue working until some good is accomplished.

Charity enough to see only the good in our neighbour.

Love enough to desire to be useful in helping others.

Hope enough to remove all anxious fears of the future.

Physical Ingredients:

Health enough to make work a pleasure.

Wealth enough to sustain a living.

Strength enough to do the thing before us.

sional that only experienced psychiatrists can tell them from actual schizophrenics. For the experiment every word and action is recorded.

What is the purpose of this strange and daring research? The classic method of conquering a disease always has been to produce it experimentally in the laboratory, so that its cause, process and cure can be studied. Yellow fever, diabetes, tuberculosis and many other diseases have been brought under control in this way. "When we know enough to be able to create a disease," one researcher said, "we are closer to its cure."

Mental illness is more widespread than any other major disease. Here at last was a drug of which investigators long had dreamed. With it they could accomplish many things. For example, they could learn to understand what a psychotic person is feeling and thinking. They could study the mental changes that take place as psychosis develops. They could relate also the mental changes to physiology and body chemistry and, finally, they could test various treatments.

Scores of research volunteers have become temporarily insane to test the effects of LSD, a new tool in the study of mental illness.



Photo U.S.I.S

Mental illness is more widespread than any other major disease. Here at last was a drug of which investigators long had dreamed.

At Boston Psychopathic Hospital, Dr. Max Rinkel and his associates gave LSD to more than a hundred healthy volunteers and a number of psychotic patients The subjects' reactions were carefully studied and recorded for a number of hours by both the person under the influence of the drug and by observers.

LSD's value in experimental psychiatry lies in the fact that normal people under its influence can describe what they are experiencing without losing their awareness of being under the influence of a drug.

"The thread of reality is not cut," one psychiatrist said. "As usually defined, consciousness is clearly retained in almost all cases Most of the patients appear to be partly withdrawn from reality but are able to describe their experiences afterward with remarkable clarity." During the LSD experience the patient has a feeling of watching himself, exploring his own mind and observing internal psychic events while retaining sufficient consciousness to record the experience and to reproduce it afterward.

Descriptions of the experiences undergone by volunteers attest the great courage required for one to allow himself to go mad even temporarily. On the average the major effects last about six hours Signs of the drug's action begin to be observed from twenty minutes to one hour after it has been given. The subjects have a number of physical symptoms such as restlessness, tremor, weakness, sweating and sensations of hot and cold. An early sign is increased emotional

activity such as giggling, uncontrolled laughing or, less frequently, crying. This is followed by feelings of irritation, hostility, anxiety and apprehension such as any normal person has under stress. Almost all patients begin to breathe rapidly, their faces become flushed and their eyes fixed, or moving as if watching hallucinations.

In the second hour they begin to withdraw into themselves. They feel that something strange has happened and that things are different Some have the sensation that they do not exist or that parts of their body have changed form. One man felt that there was nothing between his hip and foot, although he could see that his thigh and leg were intact.

One investigator reported, "Most characteristic is the assumption of colour by everything around the patient. Everything becomes tinged with blue or red so that the whole room and its furnishings appear to be of one particular colour."

"The environment becomes plastic with individual parts of the walls moving to and fro," one patient said. "I felt tears rolling down my face although I was not actually crying. Everything within sight appeared to be crying, with the walls of the room running with tears."

Seeing faces is a common effect of the drug. At first they are unidentifiable, but later patients may come to recognise them as belonging to someone they know. There is



a peculiar change in the sense of time. Even though a patient may know the date and time of day, it seems to lose its meaning and he may feel himself "out of time," with no concern for past or future. He may lose his usual discrimination between himself and others, often attributing his own feelings to other persons or to physical objects.

Of great interest has been the report of Dr. R. A. Sandison and his co-workers in England who have made use of LSD as an adjunct to psychotherapy. Dr. Sandison believes that LSD exerts a selective action on the structures which may be the seat of repressed memories. When he gave LSD to patients under psychotherapy, they divulged deeply repressed information which was of great value As



this psychic material surged up into consciousness, disturbed and often violent behaviour resulted. In re-living personal memories, some patients became children of five or six and regressed to a more uninhibited and primitive type of behaviour. Some went through birth pangs with dramatic and characteristic pains and movements.

"Of particular interest was the observation of hostility," Dr. Rinkel says "In personal relationships where the other person was demanding or threatening, the subject's attitude became hostile. As a result he tended to devaluate the person."

When a subject encountered a person who seemed unfriendly or too inquisitive, he perceived a change in the person's appearance creating an unfavourable carica-



ture. He would refer to the person as having a diabolical face, a flattened face or as a young woman who looked a hundred years old.

On the other hand when the other person was friendly or gave him emotional support, the subject distorted him in an extremely favourable light, calling him, "big my very rock of Gibraltar," "soft and warm" or "glowing with youth and health." The underevaluation of the interviewer in these circumstances, as shown by the distortion of his appearance, seems the result of keener and more acute realisation of inter-personal relationships by the subject under LSD.

The psychotic symptoms begin to decline rapidly in the fourth hour, and by the sixth hour the early symptoms of irritation, hostility and anxiety return. Then the effects of the drug subside and the subjects return to normal.

What would motivate anyone to volunteer for such an experiment? Many of the volunteers were attendants, nurses, psychologists and doctors at mental institutions who had struggled for years to get a deeper understanding of what their patients were thinking and feeling They wished to have a temporary psychotic experience in order to gain this insight. Other volunteers hoped to gain knowledge of their own problems. Some came out of curiosity or for monetary reasons

The experiments have greatly broadened the approach to mental illness and already have produced useful results. Researchers have seen the various defences a subject brings into use to protect himself from stressful experiences and the similarity of these defences to those

exhibited by schizophrenics. As a result they can detect stressful situations of which hospital staffs have previously not been aware. Thus they can determine what treatment will be the most effective.

More important is the insight that LSD has given into the minds and feelings of the mentally ill. Now that researchers can step at will into the world of the insane, barriers have been broken down and mental illness is no longer so strange or mysterious. There is better communication between the sick and the well.

The greatest value of these investigations, however, lies in their having directed interest to the biochemical and physiological basis of mental illness. LSD offers the possibility of tracing naturally occurring schizophrenia to its physical source. Tagged with radioactive carbon, LSD has been watched as it concentrates in the liver and adrenal glands. Here Dr. Rinkel and his co-workers believe it interfered with the chemistry of the adrenal glands that controls our emotional lives. They also believe that some naturally formed substance like LSD does the same evil job in schizophrenics as LSD does in normal people. It interferes with normal metabolism and brings on the disease.

The possibility then opens up that a counter-drug may be developed that would block the action of both LSD and its natural counterpart and permit the adrenals of schizophrenics to function normally. The LSD experiments offer a means of testing the effectiveness of such blocking compounds on normal human volunteers. Chlorpromazine, reserpine, sodium amytal and the hormone corticosterone have reversed the action of LSD. An injection of these drugs has brought volunteers who were raving back to normal hours before the effects of LSD ordinarily would have worn off. These drugs also have restored "natural" schizophrenics to lucidity but so far only for a short time

Researchers now are seeking an anti-LSD substance that would also work effectively against "natural" schizophrenics. "Various observations will have to be related into a consistent theory to further research in this field," Dr. Rinkel says.

The pieces of the jigsaw puzzle are lying around. Many of the right pieces are at hand and others are yet to be found. Putting the whole together is a challenging task Now it is at least possible to hope that learning what makes the personality of man function normally or abnormally lies just around the corner and that the war on mental disease may produce a major victory in the next few years.

THE MIRACLE OF MAN'S BONE

(Continued from p 17)

are almost in hiding. It is surprising to find how eight bones of many shapes can hide in each wrist, how seven can hide in each ankle, eight in the skull and seven in the face All these numerous bones, apparent or concealed, show that the most curvaceous of women is as "bony" as the most emaciated of men, both having over 200 bones, ranging from the thigh bone, which is the largest, to the stirrup bone in the middle ear, which is the smallest in man's skeleton

With all its tough durable bones, the skeleton would seem to be a dead and inert frame-work, designed merely to support the muscles. But bones are very active and alive in themselves even when the body is in complete rest. The densest bone is filled with blood corpuscles that are always busy with maintenance, repairs, adjustments and scavenging, even as mechanics in a manufacturing plant which runs day and night

The marrow in bones is full of blood corpuscles. It is the wall surrounding this marrow that we usually call the bone It looks impregnably solid, but is really tunnelled by canals through which blood vessels run The outer side of the wall is covered by a fibrous, protective tissue called the periosteum In children, this tissue forms two-thirds of the content of the bone while in the old it is only one-third, thus rendering their bones brittle and more liable to fractures.

Bone cells are active in all these three parts of the bone. For maintenance work, these cells use the skeleton almost as we use a

(Continued on p. 28.)

What A Heart Attack Is Like

ROBERT L. HOWARD, M.D.

THE time could be any time, but this is the time. Things are not going well at the office, and a thousand trivial worries add up to a hectic day for you. Two customers take a peevish attitude even though you patiently explain why things have to be as they are. Then it starts—a heavy, full pressure, a burning—in the centre of the breast-bone What did you have for lunch? Only a salad and a hot drink. Surely that can't cause indigestion. Besides, that was four hours ago. Why is it hard to breathe, as if you had just climbed three flights of stairs?

Maybe some bicarbonate of soda will help relieve your pain. If only you could get that gas off your stomach. But the soda doesn't relieve you. Perhaps a bit of fresh air will help—it is stuffy in this office. No use going for a walk; it's time to go home. The exertion of walking to the car increases the shortness of breath, and the pain is growing worse. The temperature rises, and perspiration beads your forehead. Strangely enough, passers-by draw their coats close against the autumn air. Then all at once you too feel chilly and weak, and what is the matter with those legs? Are they turning to rubber?

You decide you shouldn't try to drive after all. Your head is spinning, and you feel your heart pounding in your ears, fast, as if you'd been running. The fire in your chest is searing your insides out. No, you can't drive. . . . Where to get help? The parking lot is deserted. . . . But you can't call out; the effort is too great. You slide down against the side of your car and crumple to the ground.

So this is it! But you are only forty, too young to be having a heart attack. That man up the street last month was seventy something. . . . And your father, he was almost seventy when he had his. . . . And he lived almost a year after that. The wife and kids are fairly well provided for—insurance—home almost paid for. If only you could get a good breath. The street lights and passing traffic are dimming and fading into the distance. Is this how it feels to die?

You rouse momentarily as someone bends over you, and you recognize the uniform of a policeman. Then you hear the sound of the siren, and know it is for you. You become aware of a white-clad figure kneeling beside you injecting something into your arm. The pain grows less, not stopping entirely, but you breathe more easily as they lift you onto a stretcher.

Funny, you don't remember the ride to the hospital, but there you are, breathing fairly easily with an oxygen mask strapped to your face, two doctors and a nurse beside your bed, wires hooked up to your arms and legs, and a wire to your chest over the spot where the pain is smouldering away. No longer do you feel that the next breath may be your last.

"Blood pressure is better now," the doctor says quietly to the nurse Turning to you he smiles. "You're doing fine. Try to relax as much as possible. We've given you an injection to ease the pain, and make you sleep. You're going to be all right."

You smile weakly. "I hope so Have you called my wife?"

Someone has called her, and she is on her way to you.

The two doctors mumble to each other, disconnect the wires to the little box (an electrocardiograph machine), and quietly leave the room.

"Are you breathing more easily now?" the nurse asks softly.

"Yes, quite a bit When will my wife get here?"

"Soon. Don't try to talk now, just rest."

So this is how it feels. The burning pain is gone, but your chest feels sore. You are tired. . . . If only your wife would come; there are many things you need to tell her

An orderly enters the room wheeling a large contraption with a cellophane tent attached. He arranges it over the head of the bed and removes the tight mask from your face. An icy blast of air chills you to the bone, but before you can complain, the nurse tucks you snugly with blankets, and puts a ridiculous cap on your head

You've always hated hats—feel they make you look stupid—so you protest, "I never wear hats."

The nurse smiles but goes right ahead adjusting it. "You are getting better. When they start to complain, it's a sure sign."

Oh, well! You'll wear their stupid hats. . . . What will your wife think when she sees you like this? . . . But you have to see her. Then she is here—worry written over her face. Her hand finds yours beneath the covers. . . . And that understanding look—it has always been this way—no need for words.

"Did you talk to the doctor?"

"Yes," she pauses briefly. "He says you're going to be all right." Now you can believe it—she tells you the truth. A little squeeze of her hand and that reassuring smile the same you knew and loved even before you were married, twenty years ago. A warm flood of peace and relaxation engulfs you. Now everything is going to be all right. All the worries, bills, mortgages, are nothing. Then you sleep.

The bed-pan. How you hate it, yet all your arguments fall on deaf ears the first week. What do they think you are, a helpless infant? No more pain, no trouble breathing, appetite good—yet for a whole week they won't even let you feed yourself. It seems ridiculous, but when the doctor explains everything it is all right.

What is a heart attack? What causes a heart attack? Why did you have one? Thousands of questions flood your mind during the next three weeks. The doctor patiently answers them all, at least those that can be answered. You learn there are still many things that have no explanation, even to the man who devote their lives to the study of such problems.

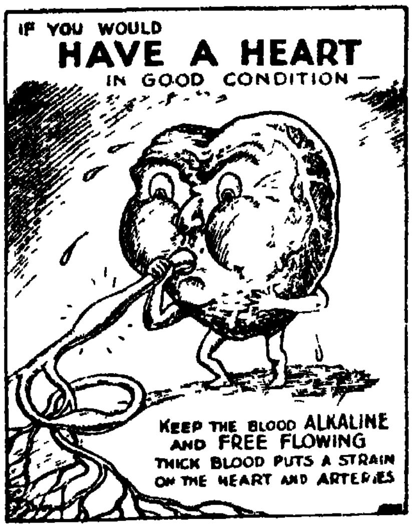
Blood supply. You learn that the heart operates on pretty much the same system as business—supply and demand. You recall those dull

When you know what a heart attack does to you, you will work hard to avoid one.

aches you used to have when carrying trunks to the attic, when your arms would get numb and tingle for a while afterwords, but which disappeared after you rested for a moment. At those times according to your doctor, you had angina pectoris—the signal that the demand for blood by the heart has exceeded the supply.

This is caused by hardening of the arteries. Well, why did you have that? Because of many interrelated things. Heredity is responsible to some extent—at least to the point that the tendency toward enjoying food and over-eating runs in the family. Then there is cholesterol. What is this cholesterol stuff, anyway?

The doctor laughs (a little grimly perhaps) when you mention the foods you enjoy most. Who would think that milk, eggs, cheese, lots of butter, rich gravies, liver, sweetbreads, brains, kidney pie, fish eggs, lobster with drawn butter, and juicy fried pork chops with a healthy rim of fat would be harmful because of this injurious substance? Well, so it is a fatty



material found in high concentration in certain foods.

The doctor tells you that diet is not the entire solution, but that accumulating evidence indicates it is related, at least in some manner, to hardening of the arteries. For that reason you should avoid cholesterol and all fats, particularly since you tend to be "a little overweight" and have already suffered a near-fatal heart attack. Instead of butter, which is an animal fat, you may have small amounts of oleomargarine, which is made from vegetable fats. As your doctor explains, the body handles vegetable fats more easily than animal fats

No longer may you drink a quart of whole milk simply because it tastes good. Instead, you may have skim milk—still an excellent source of minerals, without the forbidden butter-fat. For salad dressings you may use lemon juice and tomato juice, and will learn to like them.

You leave the hospital, under your own power, and what a triumph it is! There were times when you thought it might be done horizontally in a box

At home, for the next month you gradually increase your activity around the house Sticking to your low-cholesterol diet—which really isn't bad, after all—you are jubilant when fifteen pounds melt away like magic and the doctor approves your "ideal weight."

Once a week your wife drives you back to the hospital for a blood test. This is a continuation of the treatment given you from the first night you were hospitalized. The nurse at that time gave you a handful of small white pills, and

(Continued on p. 28.)

STORY TIME

THE TORN PAGE IN WALTEN'S HISTORY BOOK—PART II

Ellen E. Morrison

(SYNOPSIS: John had never liked Walten. Perhaps it was just that Walten was all things John wanted to be.

Then, during the lunch hour one day, John accidently knocked a book off someone's desk. No one saw him do it. Many of the pages were crumpled—two of them were actually torn. It was Walten's book!

When, after lunch during history class, Walten opened his book, at once the damaged pages opened. The class was given a written assignment that day. Miss Bawar, the teacher, walking down the aisles, noticed the torn pages. She asked Walten about them. "I—I don't know, Miss Bawar," he stammered.

John wished to speak out in confession.)

All this time John was squirming uncomfortably As much as he disliked Walten, it wasn't fair to let him take the blame and pay the fine. Once he tried to speak, but no sound came out, and his mouth was strangely dry. But he tried a second time, and was more successful. "Miss Bawar?" he said hoarsely

The teacher turned. "What is it, John?"

"I—I'm the one who should pay the fine!" he blurted out. "I knocked the book off his desk by accident when I came in to get my lunch money. I'll bring the one rupee tomorrow, if that's all right." John paused, and shifted his gaze to meet Walten's. "I'm sorry, Walten I should have told you sooner."

Miss Bawar spoke then "John, I'm glad you told us you damaged the book. You may pay the fine whenever you can, and it will be all right."

John glanced up at Miss Bawar as she spoke, then lowered his head and slumped in his desk, feeling miserable and condemned. Why had he been such a coward, not reporting the damage sooner? He hardly wanted to go outside the room between classes. He had never been very popular with his classmates, and now he felt sure they would have even less to do with him. But when he finally did leave the room, he was surprised. His



classmates were unusually friendly He couldn't understand it.

He did not see Walten during the break between classes, but he had no liking for him, anyway.

Then, after school was out, when John left the building to walk home alone as usual, he was startled to hear Walten's voice calling, "Hey, John, wait for me!"

As Walten caught up, they turned and walked together Walten broke the silence. "I just wanted to tell you how much I appreciate your admitting that it was you who tore my book. It was mighty big of you."

They walked along in silence for a while. Then Walten suddenly exclaimed, "We've never got along too well, have we?"

"No, I guess not," John agreed in a low voice. "It's been mostly my fault."

"Is there any reason why we can't be friends now?" Walten asked.

John looked at him in surprise "You mean you want to be friends with me, after the way I've acted?"

"Sure, why not?" Walten said "And the other fellows on our baseball team told me they'd like to have you come out for practice this afternoon. Do you have time?"

"Do I? I should say so!" John exclaimed It was the first time the other boys had asked him.

"Fine!" Walten exclaimed "Now I've got to get home and run an errand for Mother. I'll see you at the practice field in half an hour."

John stood and watched Walten until he was out of sight. No wonder Walten was popular with everybody! And strangely, he was happy to be friends with him at last, even if it had taken a torn book to do it.

SKIP-ITS

Bert Rhoads

IN A certain classroom two boys always schemed to sit together. They were "skip-it" readers. Neither of them could read well, but one could read a little better than the other. He would whisper to the first boy and help him on some of the difficult words.

The lesson to be read aloud one day had in it the sentence, "George Washington was the father of his country."

Boy One started out in a good strong voice. "George—" But he did not know the next word and nudged Boy Two who whispered, "Washington."

Boy One went on. "Washington was the—"But he didn't know the next word, and again nudged Boy Two, who whispered, "father."

Boy One proceeded. " Father of his—"

But was stalled again and nudged Boy Two. But Two didn't know this word, either, and whispered, "Skip-it.!"

Boy One read loud and clear for his teacher. "George Washington was the father of his skip-it!"

Skip-it boys and girls, like these two, get nowhere very fast If they work in the garden they skip the weeds that are hard to pull If they wash dishes they skip the pots and pans because they need the extra cleaning. If they mop or sweep they skip the corners.

And when these skip-it youngsters grow older they don't really grow up— they are still babies, only bigger ones They expect Daddy and Mamma to wait on them hand and foot just as they did when they were younger babies

George Guess, whose mother was a Cherokee Indian and whose father was a white man, lived among the Indians of his mother's tribe While the other Indian boys hunted and fished they let their mothers care for the gardens and the cattle and the horses

But George was different. He liked to help his mother in the hard work There were no schools for George, and he was quite an old boy before he learned that the white man could put his words on paper The Indians could not do that, for they had no written language George thought this putting words on paper was like catching wild animals and taming them in cages. Could he learn to read and write the white man's language?

George was not the boy to do his work in a careless, lazy way, skipping over or around the hard problems of life. He studied the white man's language till he could write it well.

Grown to manhood, he acquired some wealth as a trader The gold and silver coins he got from his sales he made into ornaments, and sold them to the Indians He stamped his name, George Guess, on each ornament, and soon jewellery with his name became a sign of excellence

The Cherokee Indians still needed a written language, and George was now ready to make it for them. Many years he worked hard, but at last he had an alphabet of eighty-five letters. He made them into words and everywhere men praised him

Soon there were presses printing books in the Cherokee language And George Guess went about among his people teaching them to read He probably had some skip-it readers, too. Most teachers have them. Wouldn't it have been interesting to hear some of them read in the Cherokee language, "George Washington was the father of his skip-it," and see what Teacher Guess would do about it?

WORKING WITH "GINGER"

Part I

CHARLES K. TAYLOR

GINGER was a boy. Of course that was not his real name, but it was what "the fellows" called him .

"Why do you call him 'Ginger'?" I asked one of them

"Oh," he replied, "because he isn't "

Boys' nicknames are usually significant. This lad's nickname had seemed singularly inappropriate until it was explained that he showed as little "ginger" as a boy could well show and live When I first ran across him he was about fourteen years old. He was sitting with a group of boys who were listening to a supposedly interesting story—sitting right on the middle of his spine—and whether he was paying attention or not, it would have been difficult to tell

Watching him that afternoon, I learned that his general behaviour bore out the first impression given by his attitude. It was obvious that he was an apathetic lad, inert mentally and physically. What, then, were the causes for this inertness and general slouchiness? He was not breathing through his mouth, although his jaw did sag a little sometimes. As far as I could see, the teeth in his upper jaw were regularly and nicely placed and were not the least crowded or crooked. No, Ginger had no adenoids. There might be no physical defect at all, but he was obviously in a miserable condition. His colour was poor and his muscular development wretched

I cultivated his acquaintance and found that he had a first-rate mind, which at times worked with unusual celerity and effectiveness.

The problem was: Did Ginger go with a bad crowd, was he morose, moody, unpopular, and generally inert because he was physically under-developed, or was he physically under-developed because he went with a bad crowd and was basically inert, and so on?

One day Ginger was hit a staggering blow in a boy's most vulnerable spot when he was goaded into running a hundred-yard race with some twelve-year-old boys. He was fourteen, remember, so he could not well refuse a challenge, no matter how he hated running. The upshot was that he ran and that they beat him outrageously; for he fell flat with exhaustion before the race was more than half over.

(Concluded Next Month)

HOMEMAKERS' HELPS

THE BUILDING BRICKS OF THE BODY

M. NINAJ LARSON

JUST as the various minerals and vitamins are necessary in our daily diets if we wish to be well and strong, so is protein necessary. In fact, life without protein is impossible, for protein is an essential part of every cell of the body and also makes up a large part of the solids of a muscle cell. Without protein, growth is impossible. Without protein, the repair of worn tissue is impossible.

What is protein and in what foods do we find it?

Proteins are jelly-like substances made up of various chemicals, chief among which is nitrogen. It is the nitrogen which makes possible the building and repairing of living tissues.

A protein is a very complex substance chemically. Each protein is made up of many individual chemical compounds which are called "amino-acids." In foods they are found in various combinations, thus giving a characteristic and different protein value to each food. Milk, for instance, is a rich protein food, and dahl is also a rich protein food. In each of these two foods the amino-acids are of different kinds and are arranged in different patterns. The proteins of both of these foods are necessary.

Frequently these amino-acids are called "building stones" or "building bricks," since living tissue is built of them. Extensive research has discovered about twenty-three of these amino-acids. About ten of them must be furnished to the body in food. Others can be formed in the tissues from the protein part of the food that is eaten. When we eat protein-containing food, the proteins are split up into their different amino-acids. These fragments are sorted out in the body and some of them are re-formed into the new proteins which the body needs for repairing tissues and for building tissues.

If a protein contains all these essential amino-acids, we refer to it as a "complete protein," but if a protein food lacks one or more of them, we call it an "incomplete protein." Both kinds are necessary.

Milk, some nuts, soya beans, eggs, and meat contain complete proteins. Legumes (such as dahl, beans, or peas), whole grains, vegetables, and fruits contain proteins which are incomplete, but which are of an excellent quality. When legumes or any of the other so-called incomplete proteins are combined with milk or eggs, the

RECIPES

STEAMED EGGS

Oil an iron frying vessel. When it is slightly hot, break in the eggs and sprinkle over them about 3 tablespoons or more of water for every 2 eggs. Sprinkle lightly with salt, cover with a tight-fitting cover, and cook over a medium fire until white over the top like a poached egg. Remove and serve immeditely.

DAHL CUTLETS

Three eggs; 2 cups breadcrumbs; 1 cup cooked dahl; chopped onion as desired; seasoning; salt.

Beat the eggs, add other ingredients, shape into cutlets. Fry until crisp and brown.

GREEN-PEAS-AND-POTATO LOAF

Two tablespoonfuls margarine, ½ cup dry breadcrumbs, 1 cup cooked mashed peas; 1 cup cooked mashed potatoes; ¼ teaspoonful salt; ⅛ teaspoonful nutmeg; ½ cup thick white sauce; 2 hard-cooked eggs, sliced.

Brown crumbs in margarine and sprinkle half of them into a well-greased loaf pan to form a lining. Mix together peas, potatoes, remaining crumbs, and seasonings. Add white sauce made of 2 tablespoonfuls margarine, 2 tablespoonfuls flour, and ½ cup milk. Mix well. Lay alternate layers of the pea-potato mixture and the sliced eggs until all is used. Bake in a moderate oven, about 350°F. about half an hour. Serve with tomato sauce.

This mixture instead of being baked may be made up into cutlets and fried in hot oil.

body will be richly nourished. Flesh foods are not at all necessary, since the body with this type of combination receives a perfect combination of proteins for satisfactory repair of tissues which are worn down by every day's activity, and, in the case of children, for building new tissues, which, of course, means proper growth.

Because we cannot store proteins as we can vitamin A, fats, and sugars and starches, it is necessary for the housewife to give careful thought to her daily meal planning to make sure that her family is fed good quality protein food every day.

Children, adolescents, pregnant women, and mothers who are nursing their children have higher protein needs than do normal adults who need protein only for replacement of worn-out tissue. Those convalescing from a wasting illness and athletes in training also need a relatively high amount of complete proteins.

If the food does not contain enough protein, the body will be stunted, the physique will be poor, the muscles will not be properly developed, and the person will be fatigued and incapable of doing his best in any kind of work, mental or physical.

The body can use only so much protein and no more. The tissues take what they need; what can be used up for energy is so used—the nitrogen is excreted through the kidneys in the form of urea; and the rest, Dr. Sir Robert McCarrison says, "is left over in the intestines where it is wasted and goes bad. . When this happens, we may get ill because poisons are absorbed from the intestines into the blood: these poisons cause headache, fatigue, and sometimes pain and swelling of the joints."—*Food,* Dr. Sir Robert McCarrison.

Many people include flesh in their diets as the chief source of protein. However, a combination of protein-containing foods makes the use of flesh altogether unnecessary in the diet. A vegetarian diet has been repeatedly proved to be adequate for the best nutrition It does not contain the poisons and bacteria that are present in the dead flesh of animals. And when carefully planned and well prepared, it produces vigorous physical health, a keenly active mind, and promotes a satisfying spiritual development, provided other conditions are conducive to such development.

Many eat flesh because it is a complete protein food. However, not many stop to think that the "complete protein" flesh of the cow or goat was made by the body of the animal from purely vegetable sources.

When the diet includes pulses, whole grains, and nuts, and milk and eggs, and when leafy vegetables and fruits are added, the protein is of so super-excellent a quality that there will be perfect maintenance and a superior building of new tissues.

Remember to use protein foods only in moderate amounts. A medium-sized serving of one protein-rich food besides milk or curds is sufficient. It is not necessary to serve milk or curds at each meal. We would also like to mention at this point that the protein is found in the skim milk, not in the cream. The other vegetables or fruits served at the meal also contain protein, though in smaller quantity. But a medium-sized serving of one protein-rich food, as just mentioned, with milk or curds at one or more meals (more in the case of children and pregnant or nursing women), besides the other vegetables or fruits that will be served at meals, will provide the body with all the protein of a good quality that it needs and that it can satisfactorily handle.

HOUSEHOLD HINTS

- When painting and re-doing furniture, be sure to protect your skin from paint splatters. Remove spots with turpentine and wash the skin thoroughly with soap and water. Also be sure to wash your hands carefully before eating When through with the work, take a full bath.
- In case of dog-bite wash the wound promptly, gently, and thoroughly with soap and water. A doctor should be consulted at once in such an emergency.
- Figs are an excellent and nutritious food. Ancient literature is filled with references to the place of figs in the diet Here is a good way to stew figs. Place them in a degchi and cover with cold water. Cover the degchi and cook slowly over a low fire for about half an hour. After cooking, you may add a little sweetening. A little honey or gur is excellent.
- An unusual way to serve figs is to cut up some stewed figs fine and cook them in a custard.
- When washing greens, cut off any wilted parts before putting them into the water. When cooking green leaves never add soda, for it destroys the vitamins in the greens, and takes away their crispness. You may cook the greens in a tightly covered degchi, with only the water left on the leaves after washing This method preserves the vitamins, but the greens will be a bit faded in colour.

WHAT A HEART ATTACK IS LIKE

(Continued from p. 23.)

every day the technician drew blood from an arm vein. When you asked the doctor about it he said they were giving you anti-coagulants—medicine that would thin out the blood and help the damaged heart muscle heal itself. What if it gets too thin? Well, that is why the tests have to be taken every day to keep the blood at just the right amount of thinness. The medicine also will help prevent blood clots from forming, breaking off in the circulation, and wandering around the arteries and veins until they lodge in some part of the body such as the lungs, an arm or a leg, or even the brain.

While you were in the hospital you presented your arm for the "sticking" each morning without complaint Although you have left the hospital you are recuperating satisfactorily, you continue taking the medicine for a while By now the dosage is stable, and needs checking only once a week.

Cigarettes, or rather the absence of them, didn't bother you at first. The thought of smoking didn't occur to you while you were very ill, but after a few days you thought a cigarette would taste pretty good. After the oxygen tent was removed the doctor recommended very strongly that you have no tobacco. "Tobacco causes vaso-constriction, or clamping down of the muscular wall of the arteries," he explained. "And thus, when the hole in the middle is not so big, of course less blood can pass through to nourish the heart."

He also mentioned the sensitive electronic thermometers that when attached to a patient's fingertips show that after only one cigarette the fingers "cool off"—proving that the arteries have clamped down as a result of the tobacco.

That clinched it for you. After all, you want that ticker of yours to get all the blood it needs. You've already stopped smoking. It is now simply a matter of giving up one cigarette—the first one.

Finally the doctor gets around to what he describes as a very important part of the problem—the three double E's: (1) excessive exercise, (2) excessive eating, and (3) excessive excitement. These three, the doctor tells you, create conditions that produce blood-vessel disturbances of which heart attacks are only one example. And he cautions, they should be avoided not only by those who have had a heart attack but also by those who wish to prevent a heart attack.

Brother, you are sold! You know from very personal experience what a heart attack is like. If following your doctor's advice will lessen the chances of your having another, you'll be one of the best patients he's ever had. Your only wish is that you'd known ten years ago what you learned painfully at the age of forty.

THE MIRACLE OF MAN'S BONE

(Continued from p. 21.)

commercial bank. The cells withdraw calcium salts from the skeleton to compensate any lessening of the salts in the body through food deficiencies. The withdrawals seem to be effected by virtually blank cheques. No attention is paid to the bank book, or the weakening of the skeleton. If the food is continuously deficient, there is continuous withdrawal, finally ending in rickets or other skeletal diseases. On the other hand, if there is abundance of the salts in the body, the excess is no doubt deposited in the skeleton bank.

The cells, called osteoblasts and osteoclasts, do antagonistic jobs as builders and destroyers. But when a fracture to the bone occurs they show marvellous capacities of co-operation. The blood clots around the damaged parts, and the cells organize in this medium. The osteoclasts break down the damaged parts and osteoblasts build it up into new bone. A thick ring is created joining the broken ends and filling up the crevices When union is complete the thickening is absorbed, leaving the bone as it was before, in shape and in content.

If a bone is seriously infected, as in osteomyelitis, and finally becomes dead, it has to be removed by surgery. If not, the bone cells themselves proceed with the removal of the dead matter. This scavenging is known as necrosis in medical parlance. Living bone surrounds the dead matter and by sheer force of numbers, as it were, push it up and out the skin where other cells have already established an opening, and a constant discharge of pus takes place until the dead matter is completely scavenged from the living system

The bone cells are utilitarian in character, according to Sir Arthur Keith, M.D, Professor at the Royal College of Surgeons in England. They are capable of inferences and conclusions. When a person spends all his time in bed the bone cells do some quick thinking and conclude their master does not need strong limbs. They proceed to take away strengthening salts from limbs. Osteoblasts become sluggish and building activity is considerably lessened while the destroying activity of the osteoclasts is accelerated. If we exercise the bones, then building activity becomes faster than destroying, and the bones grow in strength.

Bones, or the cells in them, are

thus singularly alive, very observant of the moods and habits of the person in whose flesh they lie buried, and perform operations very similar to those of the person himself

But human bones are a paradox. they are, especially in art, the recognized symbols of death and disintegration; but in actual fact, or to palaeontologists like Dr. Chung of the Chinese Academy of Sciences, they are symbols of life and serve as guides to life in the historic past.

THUMB-SUCKING

(Continued from p. 15.)

One mother offered her three-year-old thumb-sucker a watch if he would stop. She was a surprised but happy mother when he promptly accepted her offer and kept his part of the bargain.

The happy ending to the story is that you need not treat thumb-sucking during infancy or later on if it is associated only with sleep. You need not censure or shame. Should your child chance to need medical help, go to your pediatrician for guidance. Your reward will be worth the effort.

DON'T RUSH YOURSELF TO DEATH

(Continued from p. 10.)

by jumping out of bed at the sound of the alarm, rushing through her grooming, gulping down breakfast, and hurrying to work. She hurries all day under pressure, then rushes home and even tries to rush herself to sleep. She tosses a good portion of the night, and awakens exhausted. She never learns to relax, that is, not until she collapses.

An elderly woman, against her better judgment, decided to hurry across the street just as the light changed. She wanted to get home. She didn't know exactly why she was in such a rush, but she wanted to get home. An oncoming car screeched to a halt, but it frightened her, and her legs failed. She slipped, and broke her hip. The few hurried moments, actually of no consequence, brought many months of misery and great expense.

Elderly people are often victims of accidents caused by their desire to hurry. They forget momentarily they are no longer young and that their reflexes are not as fast as they used to be. They should consciously move more slowly and cautiously, never allowing themselves to become rushed.

Premilla's husband was irritable when he was hungry. To avoid an unpleasant scene she always tried to have dinner ready when he arrived home from work. But one night she was late, and hurrying. The baby was underfoot, and Premilla was getting more nervous by the minute. When the car came to a stop in the driveway, Premilla grabbed the teapot to prepare the hot drink. As she did so, the baby lunged forward excitedly to meet Daddy. There was a collision, the teapot slipped, and the baby was scalded.

If Premilla's husband had been a little more tolerant, and she hadn't allowed herself to become rushed and nervous, the accident might not have happened. Greater tolerance and consideration by all members of a family lessen nervous strain and reduce mishaps.

Mohan was a "better late than never" man. His boss warned him consistently about being late, until he finally said, "Mohan, if you're late once more I'll fire you." One morning Mohan overslept, but he couldn't afford to be late, not now with his wife expecting a baby. He rushed through the streets, careened around the corners on two wheels, and screeched his tyres slamming on the brakes. True the other fellow missed the stop sign, but if Mohan hadn't been rushing, he could have prevented the accident. It all happened because the demon "Hurry" took Mohan by the arm.

Being late can be a habit, and usually is. Starting ten minutes earlier can mean the difference between health and ulcers, high blood pressure, heart failure, or even life and death. It can be the difference between tension and relaxation or between mental alertness and dull stupidity. Arising ten minutes earlier can be the difference between security and disaster.

A hurried mind is not a rational

ARE YOU REALLY SICK?

(Continued from p. 13.)

diseases may be acute in the patient whose demand for affection has been frustrated.

Symptoms related to the nervous system:

1 Insomnia is generally of neurotic basis, unless it is due to pain or organic disease.

2. Headache is often associated with emotional stress, of a conscious or unconscious variety.

3 Itching and dizziness may be caused by dissatisfaction with the environment. The patient really wants to strike, shake, or punish another person, but instead becomes a martyr, taking punishment on himself.

Because about two-thirds of the illness encountered in general medical practice is essentially nervous and mental in origin, it behooves both the doctor and the patient to think deeply in their search for a neurotic factor as well as a physical defect. It behooves both to consider faithfully the question "Are you really sick, or do you only think you are?"

mind. One who is rushing is more concerned with the time element than with what he is doing. As a result he does not think clearly, and becomes momentarily careless. It is these rash or irrational moments that bring about burns, broken bones, and even death.

Under the pressure of present-day living and business, the pitchfork "Hurry" is constantly on the prod, creating havoc wherever it goes. Until we learn to allow enough time for each task and refuse to be rushed, the demon "Hurry" will remain on the prowl.

Slow down, learn to relax. Live a little more healthfully, a little more wisely, and quite a little longer. Don't rush yourself to death!

GARDENING FOR HEALTH

PEAS AND TOMATOES

D. G. Cooper

PEAS

ALTHOUGH there are innumerable varieties of green peas, they may be simply classified as the tall or the dwarf kind It is not necessary for the home gardener to cultivate a dozen or two different varieties, but planting a few selected varieties will be well worth the trouble. The Telephone, Alderman, and Laxton types do extremely well in the plains. Marrowfat or Sugar peas are more suited for the hill stations.

Peas should be sown preferably at the termination of the monsoons. However, if rainfall is less than 20 inches, the seeds may even be sown at the commencement of the rainy season. Soil which is well enriched with stable manure is most suited for peas. If a little lime is also incorporated with the soil, it will prove very beneficial to the plants. Undecomposed manure generally tends to promote mildew on the plants. The table will give an idea as to the correct distance for sowing the seeds

	Time to Plant		Distance for Plants	
Name	Plains	Hills	Between Rows	In the Row
Peas Dwarf	Sept to Dec	Feb to April	18" to 24"	1" to 2"
Peas Tall	Sept. to Dec.	Feb to March	4 ft. to 6 ft.	1 in. to 2 in.

Invariably pea seeds are eaten up by insects before they have a chance to sprout For this reason it is advisable to treat the seeds with a little red lead or any other suitable seed dressing that is readily available in the local market. Cutworms cause a great deal of damage to the young plants. Poison bran mash will soon eradicate this pest if baits are kept scattered around the plants.

Water the plants sparingly in the beginning—say once a week—but shorten the interval to four days once the plants start flowering. When the pods appear pinch off the leading shoots to check the growth of the vine and to concentrate the energy of the plants to the pods To ensure a continuous supply of peas make successive sowings of two or three different varieties every ten days.

Pea aphids, if unchecked, will appear in great abundance and cause severe injury to the plants. Spraying with a nicotine solution will prove very effective.

Tomatoes

Anyone who has taken the pains to cultivate a small plot of tomatoes will never again be satisfied with the local market product. There are many different varieties of tomatoes, viz , Bonny Best, Ponderosa, Oxheart, Yellow and Red Pear, Cherry tomatoes, etc. All these varieties not only differ in shape and colour but also in flavour

In India very few realize the high nutritious value of this vegetable which is so rich in vitamins. Besides being used for cooking it can also be eaten raw. The juice of tomatoes is not only delicious but provides many health-giving properties.

In the plains sow the seeds from August to December and in the hills from April to June. Transplant

GARDEN CALENDAR FOR MAY

Plains

Vegetables. With the exception of Gourds and Sag, no other vegetables to be grown this month.

Flowers: Keep the beds ready for sowing the summer annuals next month.

Fruits. Layering of fruit trees should not be taken in hand.

Hills

Vegetables: Sow Beans, Carrots, Lettuce, and Indian Corn.

Flowers: Roses may be given liquid manure.

the seedlings when they are about two inches high. They should be in rows four feet apart and twelve to fifteen inches between the plants. Since tomato plants need staking they can either be supported by strings or stakes or may be grown against a wire netting.

The plants will thrive better if the lateral shoots are pinched off and *only three or four stems are left remaining. Suckers growing at the base of the plants should also* be removed. Tomatoes do not need any extra fertilizing if sufficient stable manure is incorporated with the soil at the time of transplanting.

Cutworms generally eat up the stems of the plants and sometimes the leaves as well. Spraying with Lead Arsenate will prove effective. Poisoned bran mash scattered around the plants, is also a good remedy. Leaf curl and leaf blight *can be prevented by spraying with Bordeaux mixture or Pyrox.*

THE EDITOR ASKS
"Need a Lift?"

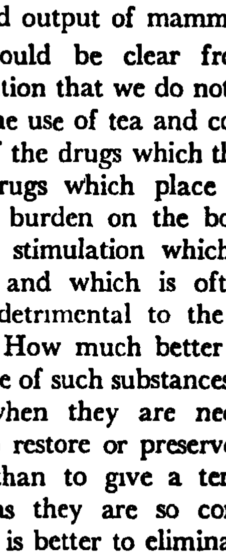
(Continued from p 7.)

the doctor prescribes it, it is of value. But its value is lessened in such cases when it is used habitually. It is also a tonic for the heart, and here again, when used under medical advice as a heart tonic, it may be helpful. It also has a strong diuretic action, that is, it seems to stimulate the function of the kidneys and the organs of urinary excretion. When caffeine is taken into the body it is there oxidized to uric acid and excreted in that form.

A great many medical practitioners warn patients to do without tea and coffee and it is very well known that in certain cases there are good reasons why caffeine is harmful to the individual. Since we have already mentioned gout we will refer to it again in this connection. In gout everything must be done to lower purine intake and in this way to lighten the load of already over-burdened kidneys. In such diseases not only should the patients eliminate from their diet flesh food, but also tea and coffee which contain caffeine, and other purines.

Another purine found in tea is theophylline. There are small traces of this in tea. Another purine found in tea is theobromine. It is interesting to know that this is not found in coffee beans, but is found in an extract of the cocoa bean. It is a powerful diuretic and is also excreted as uric acid by the human body. Tea leaves also contain the purine known as adenine. This substance also contributes to the uric acid output of mammals.

It should be clear from this presentation that we do not recommend the use of tea and coffee because of the drugs which they contain; drugs which place an additional burden on the body and cause a stimulation which is unnatural and which is often ultimately detrimental to the human system. How much better it is to make use of such substances only at times when they are needed in order to restore or preserve health rather than to give a temporary "lift," as they are so commonly used. It is better to eliminate from the diet everything which is of harmful effect upon the human system and to eat and drink only those things which contribute to the general well-being of the system.



In closing we quote from *Good Food*, by G. E. Cornforth, pp 212, 213.

"Tea and coffee contain two harmful substances, tannin and caffeine. Tannin has a tanning, or astringent, effect upon the lining of the stomach and upon albuminous foods. It interfers with salivary and stomach digestion.

"Caffeine is one hundred times as deadly a poison as alcohol This will account for the statement made by Dr. D. H. Kress, 'Tea is worse than beer.'

"One pound of average tea contains 252 grains of caffeine. Twenty grains of caffeine is sufficient to kill a man. In one pound of tea there is sufficient poison to kill twelve men, two rabbits, and fourteen frogs.

"One cup of tea contains from one and one-half to one and three-fourths grains of caffeine, and three or four grains of tannin. Therefore it takes a little more than twelve cups of tea to contain a deadly dose of caffeine.

"A cup of coffee contains the same amount of caffeine and tannin as a cup of tea.

"Sleeplessness, stomach trouble, palpitation of the heart, headache, constipation, nervous disorders, arterial and kidney diseases, and liver trouble are some of the diseases caused by the use of tea and coffee.

"Tea and coffee blunt the sensibilities and make those who use them oblivious of consequences This is the reason that a cup of tea will make a tired woman feel equal to doing a big washing.

"Tea is more powerful to keep people awake than opium is to put them to sleep.

"Dr. Alexander Bryce, in *Modern Theories of Diet,* page 152, says, Tea, coffee, and cocoa are nerve poisons, cardiac poisons, and cerebral excitants."

—L. J. L.

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[EC]ZEMA: Ques.—"I had eczema [o]n my hands and the lower part of [m]y body. I tried an ordinary [me]dicine, and after a long time it [seem]ed to have been cured But [rec]ently it has again appeared on [th]e upper parts of my feet, and a [li]tle fluid exudes from affected [par]ts Please help me by suggesting [so]me treatment that may cure it [per]manently."

Ans—Without examining you [per]sonally, it is not possible for me [to] determine whether you have [ec]zema or a Fungus infection. I [as]sume that the infection is fungus [in] nature. I would suggest that you [soa]k the affected part in Potassium [per]manganate solution 1-5,000, until [the]re is no discharge and then apply [Wh]itefield's ointment twice a day.

?

FIBROSITIS: Ques.—"Can you please tell me the cause of muscular pains, specially near the neck, and a little sound of cracking while turning the neck sideways. What is the best thing to do to strengthen the muscles of the body, and is there any medicine or special foods that will help?"

Ans—Pains in the neck frequently occur because of a Fibrositis, an inflammation of the fibrous tissues of the neck. Deep and heavy massage of the neck following the application of heat is the preferred treatment. Heat should be applied, preferably by hot fomentations, i.e. blanket cloth, fifty per cent cotton, rung out of boiling water, and applied to the neck repeatedly for a period of about twenty minutes, exercising due care not to burn the skin. Massage can be done with the fingers, kneading and pressing the muscles for an additional period of about twenty minutes. This done once or twice a day regularly, should be of real value The muscles of the body can be strengthened by exercise One should be sure to take a sufficient amount of protein foods with vitamins that will enable the body following the exercises, to build muscle tissue.

?

WORMS: Ques.—"I am a young man of twenty-six and married. I am suffering from thread-worms. These increase and decrease. When a large number they bite in the rectum. I have been under treatment for three years but they do not go entirely. I used *Santinin Viola, etc*, but am not cured completely. Please suggest some treatment."

Ans.—A very simple and effective treatment for thread-worms is the use of Atabrin. 10mg. per kilogram of body weight to be taken on an empty stomach the morning after having had no supper the night before The purgative should be taken three hours later. However, treatment is of little value for one person in a family unless all are treated, and the house and surroundings are thoroughly cleansed of eggs, the probabilities are that you will be re-infected shortly after, and so the trouble continues.



THE DOCTOR SAYS

1 This question and answer service is free only to regular subscribers

2 No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases

3 All questions must be addressed to The Doctor Says Correspondence personally with the doctor is not available through this service

4 Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES Answers cannot be expected under ONE MONTH

5 Questions sent in on Post Cards will not receive attention.

6 Make questions short and to the point Type them or write them very clearly

7 Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published Address "The Doctor Says," Oriental Watchman and Herald of Health, P. O. Box 35, Poona 1.

?

INHERITING DUMBNESS: Ques—"Will children of dumb parents be dumb too?"

Ans—Children born of dumb parents may also be dumb, as this may be a hereditary thing. In some instances a child may be dumb because it associates with its parents and does not learn to speak as other children would.

?

NASAL ALLERGY: Ques.—"My sister, 16 years old, suffers from frequent colds and nasal blocking. She also has a peculiar, uneasy, upset feeling in the stomach, and gets no sleep during nights when she has this stomach disorder. Her appetite is poor. Kindly indicate treatment."

Ans—The frequent colds and nasal blocking suggest nasal allergy. Some anti-histamine given under the super vision of a well-qualified physician should give relief We would also suggest a stool test because the upset feeling of the stomach may well be due to the presence of parasites

?

STOMACH ULCER: Ques—"I suffer from stomach ulcers. I secured admission in a good hospital here for treatment for my stomach ulcer and am much better now. I have gained 5 lbs. in weight. I have had this trouble once a year for five years now Why this recurrence? What should be done to cure it altogether?"

Ans.—People who are susceptible to ulcers have frequent recurrences because the factors that produce the ulcer are usually present to produce a second and third one later on The emotional upsets, the use of tobacco, tea, coffee, hot condiments, etc, predispose to ulcers It is important that you start treatment immediately when symptoms re-appear If there is too much difficulty, it is advised that you have a sub-total Gastrectomy—an operation which eliminates the ulcer producing area of the stomach and Duodenum.

?

CHEST PAIN Ques—"I am 31 years old and feel pain in left side of chest when breathing Consequently it is painful to talk or walk. Doctors have diagnosed Eosinophil seven per cent and a slight inflammation in a certain area in the lungs. I took pentazol for $1\frac{1}{2}$ years with great relief But the pain has returned now What treatment would you advise?"

Ans—I would suggest that you repeat the Blood Count to see if the total White Count is above 10,000 and the Eosinophalia count above ten per cent in which case an injection of Acetylarsen every five days for a total of six injections is indicated. I would, however, also recommend a chest X-ray and Sputum examination and a careful physical examination by a qualified physician to eliminate the possibility of Pulmonary Tuberculosis.

THE LAST WORD

Tuberculosis Preventive

A chemical which may prevent tuberculosis in persons who are "tuberculin positive" is being tested in the United States, according to a *joint announcement by the National Tuberculosis Association and the United States Public Health Service.*

Tuberculin positive persons comprise about 75 per cent of all tuberculosis cases in the United States. A tuberculin positive is a patient whose *skin reacts and becomes inflamed in* response to a tiny dose of killed tuberculosis bacilli. The dose is often called a patch test and indicates that the patient either has active tuberculosis or has recovered from a tuberculous infection.

The chemical which may aid these persons is called INH, which stands for isonicotinic acid hydrazide. It is a simple chemical which can be produced cheaply. In conjunction with streptomycin and sometimes also with P. A. S. (para-amino salycilic acid), it is already widely used for the treatment of active tuberculosis.

Only a small dose of INH would be required to prevent tuberculosis, according to Dr. Carol Palmer, chief of tuberculosis research for the United States Department of Public Health. He said that the prescribed preventive dose would probably be one small pill the size of an aspirin tablet once a week.

If the INH preventive treatment proves effective, it could give protection to the group of persons most likely to contract tuberculosis—the "tuberculin positives." Until now B. C. G. vaccine has afforded a degree of protection to "tuberculin negative" persons, but it cannot be given to "tuberculin positives."

The testing programme on INH is being carried out with the co-operation of 900 children and their parents. Half of the children are being given a small dose of INH, while the other half, acting as controls, are given inert pills.

The official adoption of INH depends on the results of the tests. So far, Dr. Palmer reported, not one of the patients under treatment has contracted active tuberculosis, but it is too early to be positive concerning the final results.

Officials of the Public Health Service, however, are so pleased with the *results already indicated by the tests that they are using INH for their own laboratory technicians and others who are exposed to tuberculosis infection.*

Water-Purification Plant

A "PACKAGED water-purification plant" capable of satisfying the emergency water needs of 50,000 people, has been developed at the U. S. Army Corps of Engineers Research and Development Laboratories in Fort Belvoir, Virginia. The plant, which can purify water up to the rate of 12,000 gallons per hour, can be operated by one man. The plant consists of three main all-aluminium sections—a cone-shaped up-flow coagulation basin 14 feet in diameter, which removes mud, bacteria and other suspended matter from polluted water, and two gravity-type sand filters. The unit is housed in a 40-foot building.

Smoking and Cancer

In an effort to stop the unscientific bickering that has raged for years over scientific evidence linking heavy cigarette smoking to lung cancer, four prestigious organizations (The National Cancer Institute, National Heart Institute, American Cancer Society, American Heart Association) set up a seven-man study group. Chairman: the University of Wisconsin's Biochemist Frank M. Strong. By the end of March the group's findings were out. Big black headlines in the press notwithstanding, the report contained no new evidence, represented instead a careful appraisal of all the published (and some unpublished) data. Conclusions:

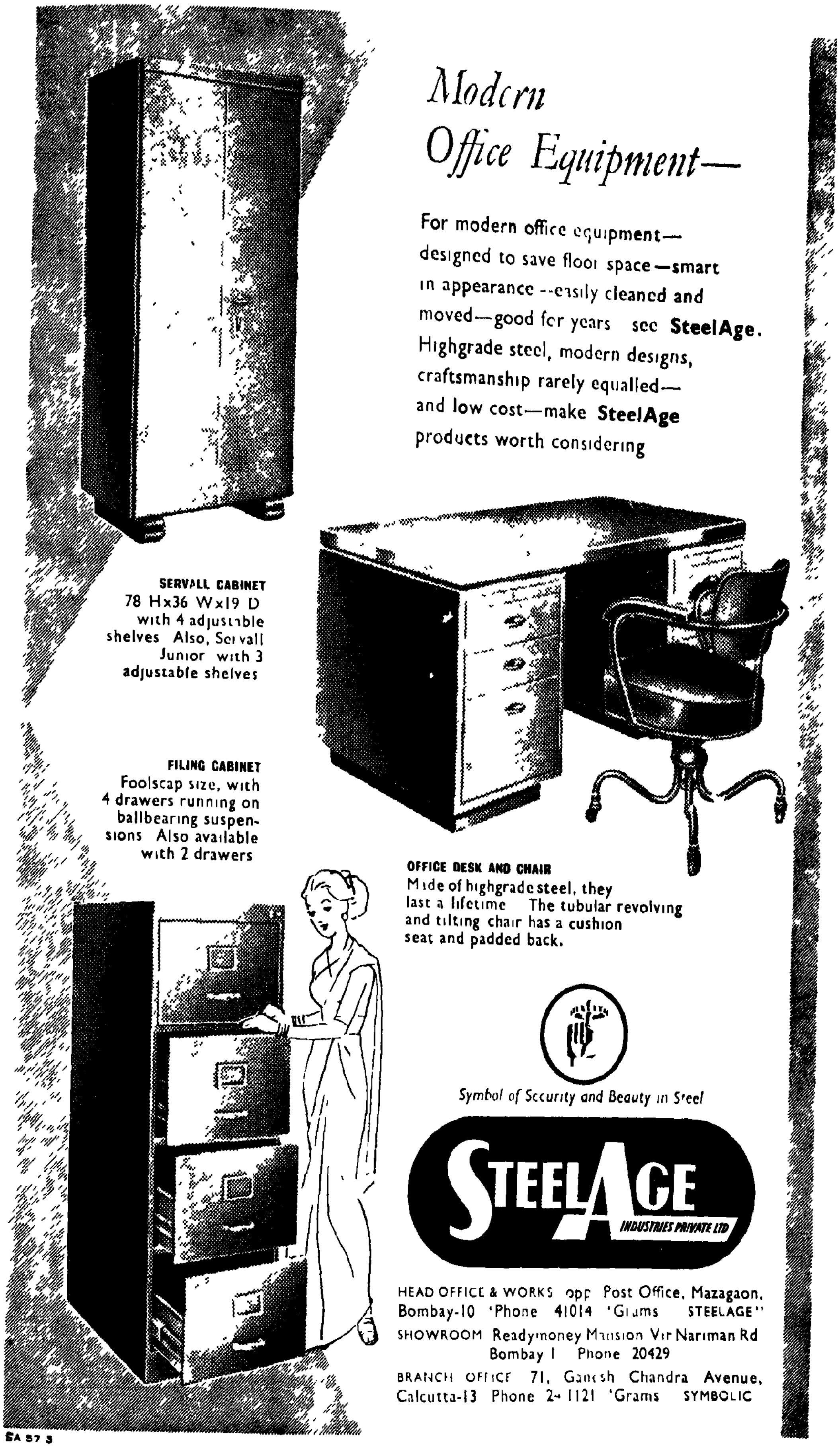
- Cigarette smoking is indeed a major cause of lung cancer. The risk increases with the amount smoked, averages five to 15 times greater (on half a pack a day or more) than among non-smokers, is 27 times greater for those who smoke two packs a day.
- Smoking is by no means the only cause of lung cancer: another is air pollution. *In smoggy Liverpool (England) 50% of lung cancer deaths have been laid to smoking, and 35% to air pollution. (A U. S. estimate blames air pollution for 31%.)*
- Evidence linking smoking with heart disease is inconclusive.

"The smoking of tobacco, particularly in the form of cigarettes, is an important health hazard," the seven experts conclude. "The evidence of a cause-effect relationship [with lung cancer] is adequate for considering the initiation of public health measures. But the group suggests no such measures. Instead, it urges more research to find the cancer-causing substance in smoke and a simultaneous effort to remove it even before it is chemically indentified. Possible answers to the problem: selection of tobacco strains, extracting the offending substance from the leaves or filtering it out of the smoke. Most of today's filters, says the report, are inefficient and non-selective, they merely trap a little of the smoke.—*Time.*

A Protein Called Phenylalanine

Doctors are learning to control phenylpyruvic oligophrenia, a brain crippling disease of infants caused by the body's failure to assimilate a protein called phenylalanine. University of Minnesota nutritionists report the case of a one-year-old boy in whom a diet of enriched and predigested milk protein, plus fruits and vegetables, arrested the disease. —*Time.*

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THE BIG BAD WOLF

Continued from p. 2

This important step forward represents a high degree of international collaboration co-ordinated by WHO because it could not have been achieved by any single country or laboratory alone. The Committee members whose laboratories are situated in India, Iran, Israel, France, Spain and the United States have been working together on problems of rabies control since 1950.

Side Reactions

Additional research carried out by several of the Committee members showed further that it was necessary to give a complete course of vaccine along with the serum therapy. Moreover, because of side reactions which can be produced by any serum, it was recommended that serum be used only in very severe exposures after testing the person for sensitivity.

The Committee also studied the results of exhaustive experiments designed to determine the best procedures to follow in treating wounds inflicted by animals suspected of having rabies. These studies showed the value of immediate cleansing with soap and water, followed by cauterizing with nitric acid on parts of the body where this can be used without danger. The third step recommended in local treatment of wounds is to inject serum around the site of the bite.

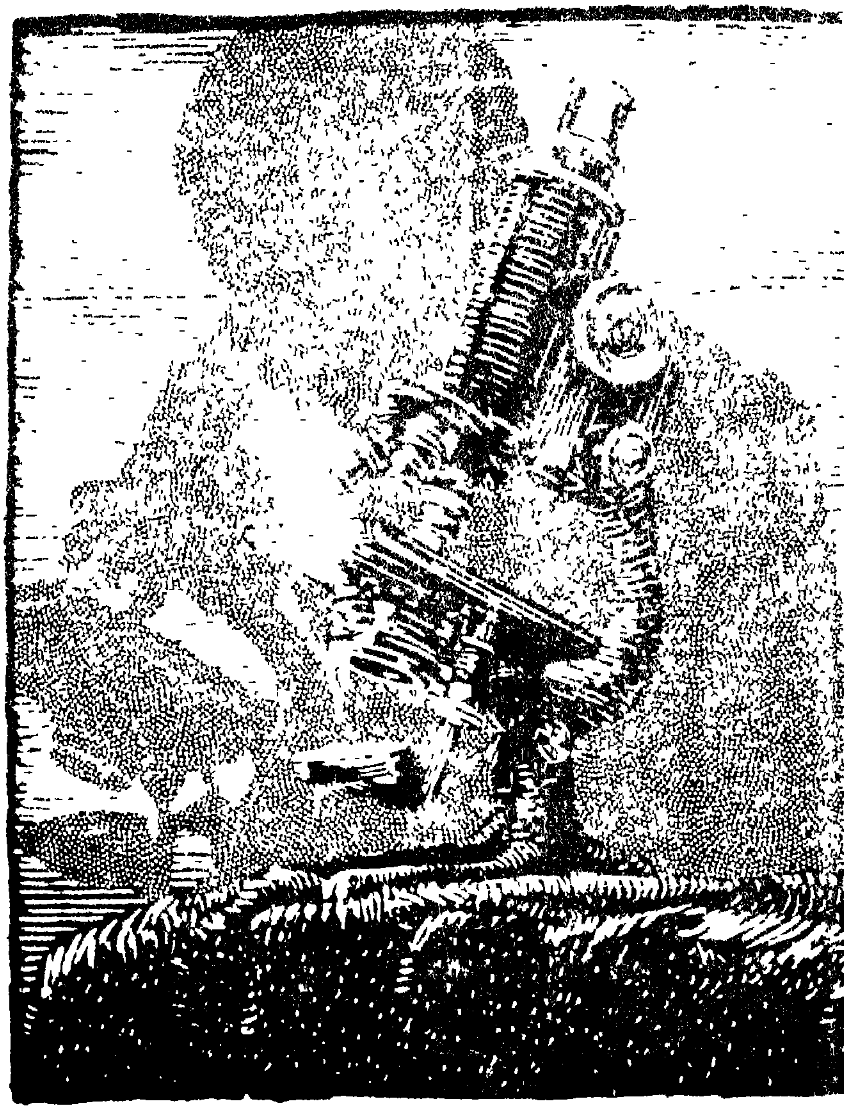
A new technique for protecting persons whose occupations expose them to the possibility of bites of rabid animals was delineated by the Committee. Veterinarians, laboratory workers, postmen, personnel of gas and electric industries and delivery services must often undergo repeated treatments with rabies vaccine, which carry a danger of post-vaccination complications.

Basic Protection

The new approach involves providing basic protection by giving very small doses of chicken embryo vaccine or a few doses of ordinary nervous tissue vaccine, followed by a single booster dose of vaccine after they are bitten instead of the long 14 to 21-day schedule of inoculations now performed.

Results of studies made on improved vaccines for dogs, cats, and cattle were also discussed. Recently developed vaccines prepared from chicken embryos were found to confer long-term protection on dogs by only a single inoculation and were demonstrated to be useful also for cattle. It was stressed by the Committee that it is not only necessary to vaccinate dogs but also to control stray animals.

Rabies in wild life, particularly in foxes, jackals and wolves, is a problem in many countries. It also exists in insectivorous bats in areas of North America and it has long been established that rabies is transmitted to men and animals in Latin America by blood-sucking bats. The finding of rabies in insectivorous bats in Yugoslavia indicates that this problem is not confined to the Western Hemisphere. Wild animal reservoirs present special difficulties and it was agreed that extraordinary measures must be evolved to combat them.



and

Herald of Health

A Magazine for Home and Happiness

JUNE, 1957



Genetic Effects of Radiation

—WHO to publish report—

THROUGHOUT man's existence on earth, he has been continuously bombarded by radiations coming from outer space, from radioactive material in the earth's crust, and from natural radioactive elements within his own bone and flesh

The intensity of this bombardment is being notably increased, in our days, by man-made sources such as medical X-ray machines, radioactive material used in medicine, and also certain material and apparatus used in science, industry and commerce, artificial radioactive elements distributed by man in nature, and, to a minor extent, shoe-fitting machines, radioactive luminous compounds on watches, etc

Radiation has been demonstrated to be one of the agents which produces genetic mutation in a wide range of organisms from bacteria to mammals, and a Group of 20 international experts was therefore brought together by the World Health Organization (WHO) in Copenhagen last August to discuss research problems connected with the effect of radiation on human heredity.

This Group has produced a highly technical report which, together with a number of specialized papers prepared by certain of its members, is to be published by the World Health Organization within a few months Advance copies of the text are at present in the hands of members of the United Nations Scientific Committee on the Effects of Atomic Radiation

"Man's most unique and precious possession is his hereditary material which must determine the health and orderly development of future generations," states the introduction to the Group's report It goes on, "This Group is of the opinion that the well-being of the descendants of the present generation is threatened by development in the use of nuclear energy and of sources of radiation "

The report states categorically that "additional mutation produced in man will be harmful to individuals and their descendants " and that " all man-made radiation must be regarded as harmful to man from the genetic point of view"

The WHO experts agreed that present developments in the peaceful use of nuclear energy should

(Continued on p 7)





A new atomic device, designed for use in emergencies is a portable X-ray unit that produces a finished picture within ten minutes without electricity, water or a darkroom The atomic substance that powers this device is a capsule of radioactive thulium about the size of a kernel of corn The new unit, which can be carried and operated by one man is being tested for service by the United States Army and may be available for civilian use at a later date

Photos U S I S

READ THE FULL STORY ON PAGE 36

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A Magazine for Home and Happiness

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ASSOCIATE EDITOR

J B. OLIVER, M D, D T M
ASSOCIATE EDITOR

Contents

OUR COVER

Woodman, spare that tree!
Touch not a single bough!
In youth it sheltered me,
And I'll protect it now.
—George Pope Morris

Photo P R Dubash

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Minute Meditations

HOW TO LOSE YOUR TEMPER

D. A. Delafield

THE family was seated at the dinner table. Both father and mother were very tired. But the children, who had been playing outdoors, were in high spirits. Finally, the noise and clamour reached an unbearable crescendo for the taut nerves of the father, and there was an explosion. In the silence that followed, four-year-old Jimmy turned to his father and asked, 'Are you mad, Daddy?'

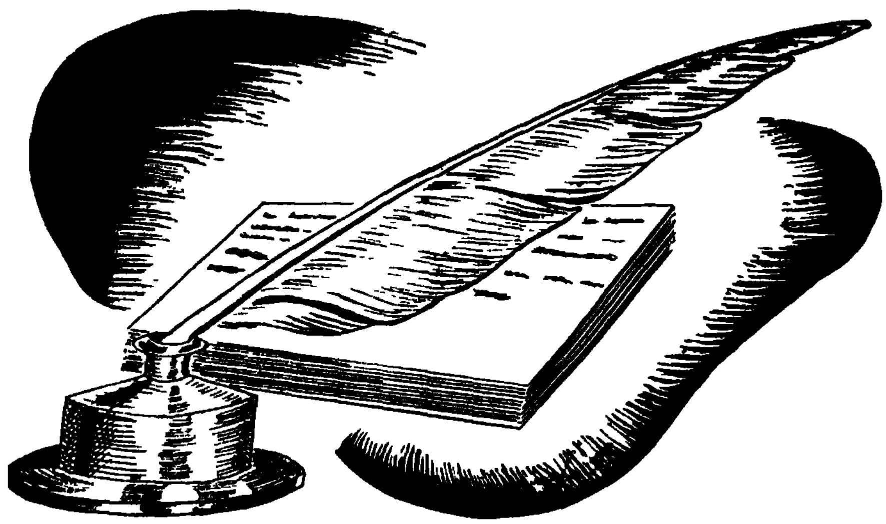
" 'No, I'm not *mad*,' replied the father, 'I'm just full of righteous wrath!'

"Greatly impressed, the youngster exclaimed, 'I want to be full of radishes, too!'

In telling this story, Thorwald W. Bender explains that the boy's remark had the desired effect. "The tension was released, as everyone laughed. The father has remembered ever since that much of this so-called 'righteous wrath' is no more than so much 'radishes.' "

If we will examine our "fits of temper," we will usually find them only bunches of "radishes." There is a sharp taste in the mouth, we whet our appetite for self-approval, and that's all. There is seldom any other justification. It is not often that we are confronted with reasonable causes for righteous indignation. Mostly, we are just plain "out of sorts," and "fly off the handle" because someone has "crossed our path," and we don't like it. Anger is supposed to be a compensating factor in adjusting ourselves to an offended mood, but it is more like the storm that precedes the calm of regret

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THE EDITOR DISCUSSES

THE HIGH COST OF NEGLECT

I SUPPOSE that we all remember that old story about the messenger who was a bit careless. He was having his horse attended to and was told that he really should have another nail put in one of the shoes on the horse, so that it would be perfectly solid. But he neglected to have that nail put in. The story goes on to tell how in a short time this man was called upon to carry a very vital message. He rode at top speed to convey the message that had been entrusted to him. But as he was going over the rough road the shoe with the missing nail worked loose and soon the horse was lamed and could go no farther. The message did not reach its destination in time and because of that an important battle was lost. So the saying has come to be commonly used, "For want of a nail, the battle was lost."

We are not going to discuss nails and battles today, but we are going to talk about some of the little things in life that may have serious consequences. Take that tooth, for example. You know the one I mean. It is that one that aches every now and then. It has a little cavity in it—you know—down in there between those two teeth. It is that tooth you have been planning to go and see your dentist about.

A lot of people have waited. They have put off giving attention to a little thing like a tooth that had a little hole in it and the result has often been serious.

I think of one person who had a bad tooth It was not a very bad tooth and it didn't hurt except once in a while. But, one day this person had a peculiar feeling in his jaw and he wondered what it could be. The next day the feeling was more painful and by the third day it was extremely painful. As he was talking with people about it, somebody said, "Probably you've got an abscess. You had better go see your dentist." He went to see the dentist. The dentist told him, "Yes, you have an abscessed tooth." The result was that this man had to have surgery and suffer a great deal of pain and unnecessary expense, because he had neglected to give attention to a very small decay spot in one of his teeth.

We recall another friend that I knew some years ago who neglect the little matter of brushing his teeth. Because he neglected to brush his teeth, decayed bacteria continued to accumulate, infection set in and after a while developed a very serious infection in the gums, which required that he have all of his teeth extracted. now, even as a relatively young man, he must wear plates, which at the very best, are uncomfortab and inconvenient—the high cost neglect.

Another friend of ours ha neglected to care for his teeth an infection set in. It was not to noticeable,—not so serious appar ently, as the abscess or the infecte gums that we have referred to, bu nevertheless, there was a continue infection that resulted ultimately in bringing about a most unfortunat complication in the heart and th individual has become a semi-in valid as the result. These three pai or are paying a very high price fo their neglect.

I remember a lady that I me some years ago She was a nurs and understood the importance o little things in health. One day, sh commented to a doctor frien about a mole that seemed t be growing. Though she ha had it for many years, it ha suddenly started increasing i size. She talked to the docto about it. The doctor was im mediately concerned and advise her to have a specimen of that mol sent to the nearest cancer researc laboratory to see whether there wa a possible malignancy. But th nurse just laughed and said, "No today. Probably tomorrow or th next day." In her case, "tomorrow or "the next day" never came Sh neglected to give that mole the at tention that it needed. For som time now, that nurse has been in her grave. She died of a very rapi

and malignant type of cancer. The first indication that she had of the existence of that dread condition was sudden increase in the size of that mole, which she neglected to attend to.

We must not forget that man who had a pain in his right side every now and then. He thought that it might be his appendix. But he thought probably there was nothing serious. He thought that it was just a gas pain or something of that nature. It is true, he did mention it to his doctor once, and the doctor said, "Well, if you are having trouble there, probably we better operate sometime and take your appendix out, just to be on the safe side." But, this man smiled and said, "Well, it doesn't hurt now. There is nothing to worry about, I guess." The doctor wasn't too sure. He told this man that very frequently when a person has a chronic appendix, it is likely that some day he will have an acute attack which could be quite serious because of the weakened state of the appendix due to the chronic infection. However, the man shrugged it off and went his way. He neglected to follow the doctor's advice. Later on he was on a trip and had a sudden attack which he thought would, like the rest of them, go away pretty soon. But this one didn't. It kept getting more and more severe—more painful—and it was only by the mercy of God that the man was able to recover from the effects of a ruptured appendix. Great pain, great suffering, unnessary expense were all involved because of neglect.

Then, too, there are those stories that we recall about somebody's eyes. The doctor said that they needed a pair of glasses. They just put it off. With the result that, now, glasses wouldn't do any good. There are those others who were told by the doctor that they should take certain treatments for their eyes and he gave them the prescriptions. But they didn't want to follow his advice. The prescriptions were a bit expensive. After all, Grandma said that all you need to do was follow some formula that she had concocted and the eyes would be all right. Now that person is blind!

We could go on through a number of instances like this that have come to our attention over the years illustrating the high cost of neglect.

Everybody in the tropics knows that it is essential to health to be certain that the water they drink is purified, that the food they eat is properly cleansed and sterilized. But how often they neglect to give the attention to their food and drink that they should, with the result that amœbiasis and bacilliary dysentery, cholera, typhoid and others of these food- and water-borne diseases are of common occurrence.

True, all educated people today recognize the value of preventative inoculations for such diseases as cholera, typhoid and plague. Yet how many people put off getting the inoculation or stay away from the smallpox vaccination centre, or just don't deliberately stay away, they may just put it off, thinking that they'll go tomorrow. For many of those people the "tomorrow" never comes, because they catch the contagion and their friends and relatives say, "Wasn't it too bad about so and so!" Neglecting to get that little scratch for smallpox vaccination or neglecting to get that typhoid shot may make the difference between life and death in your case. It has for many others.

And then we think about nutrition. We know that we should eat a well-ballanced meal. We know that we should have a certain type of food in our diet and that we should not eat certain types of food. But how often we neglect to give the time and attention to our food that we should, with the result that our whole physical being suffers.

Any time our body gets out of order we immediately begin having difficulty with those with whom we associate, because when our body is out of order then our mind gets out of order and when our mind

(Continued on p. 21.)



LETTERS TO EDITOR

I have been a regular subscriber to the 'Oriental Watchman Herald of Health' for a very long time and have been benefited immensely by reading the various articles by eminent medical men published therein.

Bombay State.

* * *

I am a student. One day I was passing through our college Library. I was attracted by an issue of the "Herald of Health." I asked the librarian to allow me to go through all the previous issues. Our librarian permitted me. It was very interesting. The regular features, namely, the Minute Meditation, The Editor Says, Better Bodies, Student's Guide, Home Makers Help and Of This We Approve, are very interesting. I never left any issue without going through these features.

What has much attracted me is the aim as well as the way the aim has been carried successfully in your magazine. I would sometimes feel and argue about the things which you write in your editorial. It is as if I am writing on all these topics.

* * *

Madras State.

We are standing with one foot in the grave and the other on a banana peel!

Florida.

THE STUDENTS' GUIDE

THE MAN WHO BOSSED JOHNSON

R. JOHNSON

AWAY back in—well, it's a good while ago—I was a red-headed boy in a machine shop. I was about eighteen and had nearly served my time, and I wanted a foremanship more than I wanted anything else in the world.

We had a travelling salesman who sold nearly all the product of the shop. It was currently reported that he had graduated from the shop and was now getting Rs 15,000 a year and doing just as he pleased. Every time he came in from the road he would come into the shop and shake hands with every man and boy there. I looked at Van (that was his name) as a prize. When I got tired of imagining myself as foreman, I would sometimes wonder if I would ever earn as much as Van did -Rs 15,000 a year! I was getting Rs. 7 a day.

One morning I was in a fearful temper, discontented with myself and the whole world. Van came up behind me. "Well, Reddy," he said, "when are you going to be foreman?" Then he sat down and drew me out Finally he said, "You can be foreman, either of this place or of some other, just as soon as you've had sufficient practice in bossing men. Everybody wants foremen and superintendents and salesmen, and all you've got to do is to start right in and practise as you did on the lathe and planer."

"How can I practise? I'm only an underling here; everybody tells me what to do, and I have to do it. They can practise on me all right—most of them are doing it good and plenty. How am I going to get anyone to practise on?"

"Well, Reddy, there's one man whom you can practise on, and that's Johnson."

"Me?"

"No, not you, but Johnson. Every man has two personalities in the one body. One is energetic, ambitious, likes to do right and get on—that's you. The other fellow is careless, shiftless, lazy, and fond of a good time—that's Johnson. Now, what you've got to do is to learn to boss Johnson, and you'll find it will take a lot of practice. When you get so you can boss Johnson successfully,—keep him right up to the mark all the time and keep him good-natured about it,—then, and not until then, you'll have the skill and practice to boss more than one man.

"Now, there's the man for you to practise on. Will you do it? Shake hands! I feel sorry for Johnson, for he'll have to stand it. I'm going to be around for a week, and I'll start you right. I'll tell you what to do, and you can tell Johnson, just as the proprietor gives his orders to the superintendent, and you get them from him. That completes the chain and makes a working agreement."



I was boy enough so that the idea pleased me. Van would come and say, "Reddy, tell Johnson to do this, and keep after him; see that he does it."

In the course of a week I began to like the game. I also found out a lot of things I had never suspected As Reddy, the foreman, I used to pull myself up as Johnson, the workman, and, according to Reddy, Johnson was a good deal of a slob.

Van went on the road, and I kept after Johnson night and day I ordered him to bed and ordered him up. I checked on his work, and I made him study. As Reddy, the foreman, I thought less of myself as Johnson, the workman, until my opinion of Johnson was at a pretty low ebb I noticed that the proprietor was watching me a good deal, and I began to be afraid that Johnson would get his discharge, so Reddy drove Johnson harder than ever.

One night I went to a lecture and heard two persons in front of me talking One had been away, and he said, "How's Reddy Johnson doing?"

"Fine," said the other. "He's assistant foreman at the shops now, in charge of the erecting, with from three to ten men under him all the time."

I heard no more of the lecture. Was I foreman? When had I become foreman? How long had I been foreman? When the new wing was being built six months before, I was put to work in it with some helpers, and my wages had been raised. Yes, I had been foreman for six months, and was so busy bossing Johnson I hadn't noticed it—I had to have outsiders tell me about it!

Six months later I was offered a superintendency of another factory at about double the wages I took it, and kept on bossing Johnson until I made a salesman out of him. Now I own the works myself, and am as far ahead of

Van's Rs. 15,000 a year as I was behind him when I started.

In my employ are a number of boys who have started to practise bossing themselves. The scheme is working as well with them as it did with me. You see, it's fundamental. It starts a boy right, and gives him the idea of self-control. That's all that makes the difference between the proprietor and the employee—one can boss himself, the other can't. It's an old idea The Bible teaches that he that is master of himself is greater than he that taketh a city.

GENETIC EFFECTS OF RADIATION

(Continued from p. 2.)

contribute much to man's social and cultural development, and that therefore some risk must be accepted. They recognize, however, that if the dangers are to be minimized, "every possible step must be taken to reduce the exposure of man to radiations, and to understand the effects of exposure.... Only in the light of more knowledge can decisions be taken to define more accurately the maximum amount of exposure which may be accepted by individuals and populations without risk of serious harm." The Group therefore examined some of the "larger gaps in knowledge" as they appeared at the present time, and listed some thirteen fields of genetic research in which the need for further investigation is urgent.

There are strong grounds for believing that inherited effects of radiation are additive, the experts agreed. A small amount of radiation received by each of a large number of individuals can therefore do an appreciable amount of damage to the population as a whole, although the effects may not appear for a number of generations It is therefore desirable to limit the accumulated radiation doses received by the sex glands of individual men and women, particularly up to 30 years of age, in order to keep the average dose to the sex glands of the population as a whole very low.

The most important sources of radiation to the human sex glands, the experts agreed, are at the present time from natural radiation (normal level between 2 and 5 roentgens per individual in 30 years) and from the radiation received by patients undergoing medical X-ray examination (probable average in certain countries between 1 and 3 roentgens per individual in 30 years). If exposure during therapeutic X-ray treatment is also considered, the "total" exposure to a population might be greater. It is however difficult, the report states, to get sound data for estimating how much radiation due to therapeutic exposures is received by persons before the age at which pro-

(Continued on p. 28.)



Photo U S I S

"Every possible step must be taken to reduce the exposure of man to radiations."

Do You Need Bifocals?

ROBERT S. ROSNER, M.D.

GOBIND is a forty-four-year-old school teacher who has been having a hard time correcting and grading the examination papers. Once upon a time he could get through correcting students' examination papers in half an hour. Now it seems to take all night. The lighting at his desk is inadequate. He has put in two extra bulbs, but still they don't provide enough light.

Even reading the newspaper after supper has become a chore Gobind complains that today's newsprint is smaller than it used to be. He notes that it is necessary to hold the newspaper at arm's length

Gobind makes an appointment with an oculist to see whether there is anything the matter with his eyes.

We now find Gobind in the office of his oculist, and the examination is well under way. The doctor asked him whether his eyes ached or bothered him with pain. The middle-aged school teacher shook his head in the nagative.

"No," he said, "I don't think so My eyes don't hurt, but I just don't see right."

When the doctor inquired about such diseases as diabetes, high blood pressure, and tuberculosis, Gobind again shook his head in the negative.

"I come from a healthy family, and have enjoyed good health all my life."

"Cover your left eye with this occluder and read the letters on the chart," the doctor instructed Gobind, handing him a spoon-like opaque object. Gobind did as directed. "Now cover the right eye and repeat the test." This was the test for central or standard, visual acuity. The patient sat twenty feet from the chart for this test.

Next the oculist tested the refraction, or focusing power, of each eye separately. *Refraction* means "bending," and as used here it indicates the manner in which light is bent to reach the central part of the eye This is done by several different methods, each doctor using the method that has proved satisfactory in his hands. The object of the refraction test is to get the best vision possible with corrective lenses. This is done for distant vision first; near vision is corrected later as needed.

The next phase of the examination concerned the testing of the eye muscles. "Follow this light with your eyes," instructed the doctor. The school teacher obeyed. Several other technical tests for muscles followed, at the end of which the doctor asserted, "Your eye muscles balance well."

There were other tests. Examinations were made with a variety of instruments, testing every part of each eye. It is by these methods that early disease processes are discovered, and early treatment can be instituted. This procedure not only preserves sight but in some cases may even prevent blindness.

"Your eyes require bifocal corrective lenses, and here is your prescription for them," advised the oculist, handing Gobind a paper "Take this to the optician of your choice After you have had your new glasses made, wear them for a few days to see how they affect your vision. Then bring them in for me to check, so that I may verify that they are properly fulfilling the prescription I have ordered"

Before the doctor finished the last word, Gobind broke in, "But doctor, do I really need bifocals already, at my age? They'll make me look older than I am. . They're hard to get used to. . . I'll probably get dizzy, may even fall and break my neck. . . . Uncle Dilip says that the sidewalk seems to come up and hit him in the face" and my Aunt Minnie says that her neck gets stiff because of the way she has to look through her bifocals.

The eye doctor explained to Gobind why bifocals were necessary. "The unnaturally close work civilization demands is done under conditions not intended by nature Despite the fact that our eyes are

...ualized all through life, there is ...e important factor that leads ...e need for bifocals.

The focusing ability of the eyes ...minishes all through life. This is ...ormal and natural, and cannot be ...hanged It is due chiefly to the ...t that the lens inside the eye ...ses its elasticity. People who are ...ar-sighted notice this reduced ...ocusing power of the eye earlier ...han those who are near-sighted. The loss of focusing ability is called ...ecreased accommodation. When ...t reaches a certain point, the ...atient requires one pair of glasses ...o see clearly at a distance and ...nother pair of glasses to see closely ...ithout strain. It is obvious that ...ne pair of glasses won't give two ...anges of clear vision unless these ...lasses are bifocals. So there you ...ave the whole story," ended the ...culist

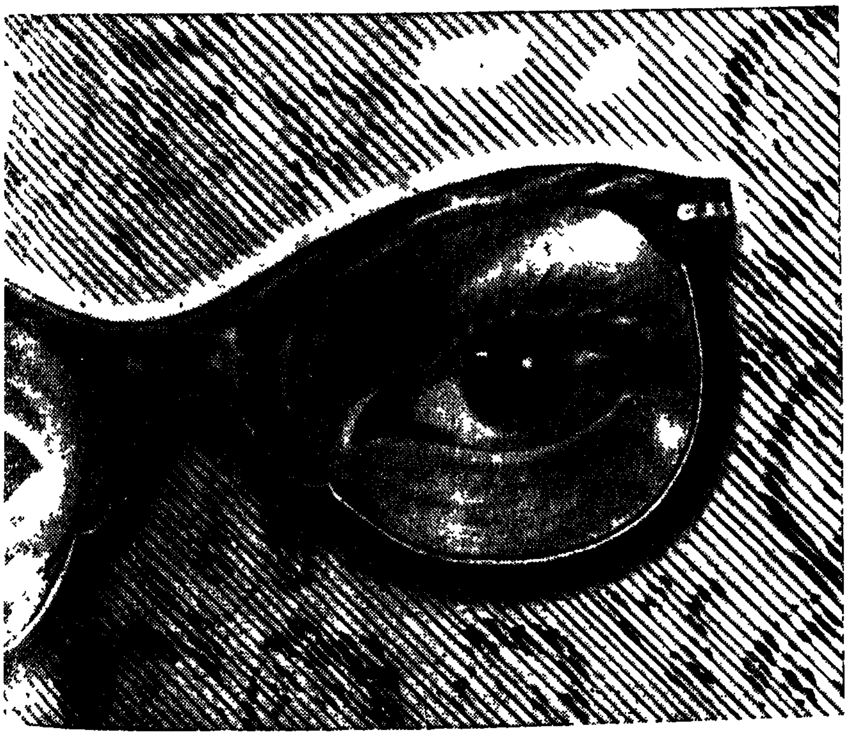
Several days passed, and Gobind ...eturned to the oculist During this ...ime the patient experienced read-...ing more as he had years before, ...nd examination papers were ...raded much more easily than ...hose of a week before. After checking the lenses of the new pair of glasses and finding them to be as prescribed, the doctor said, "These glasses should be satisfactory, and afford you improved vision."

As Gobind left the office a middle-aged seamstress walked in

"Doctor," she complained, "I see double with these bifocals"

A quick glance, and the doctor replied, "Your frames are bent out of shape; the reason for your double vision is that your right eye is looking through distance correction while your left eye is looking through the reading part. Your optician will adjust the frame and lenses and you will see well again."

Benjamin Franklin invented bifocals. Why are they necessary? The lens of the eye acts somewhat like the lens of a camera in order to focus a sharp image on the retina, which is a screen at the back of the eye. When you are looking far away, the lens is adjusted by very delicate strands for this focusing distance When you are looking at a book or a telephone directory, the lens must readjust its focus.



Truly, when you need lenses, you should get them and wear them.

With a good camera this is accomplished by adjusting the distance between the lens and the film plane. The image may be further sharpened by cutting off the peripheral rays by decreasing the diameter of the lens aperture

The eye does something similar so far as shutting off peripheral rays is concerned. The iris, the circular diaphragm that gives the eye its colour, is constantly widening and narrowing thus adjusting the amount of light that enters the eye. When sharp focusing is needed, the iris constricts, or pulls down, shutting out peripheral rays

The lens, on the other hand, cannot move forward or backward as does a camera lens It must achieve this change in focusing power by a very ingenious method. There are two chief theories as to how this is accomplished The simplest explanation is that the lens changes its shape in such a way as to bulge more in the centre when more focusing power is needed By its getting thicker in the middle, the entering light is bent more, and near objects can be focused easily

As a person gets along in years, especially around the middle forties, the lens loses some of the power to change its shape. One reason is that the lens loses some of its elasticity and becomes more rigid. This reduces the ability of the eye to adapt quickly to changes in focus.

There are several possible methods of solving this problem. The easiest is simply not to read or sew or do any close work whatever Civilization will not allow this today. Another solution is to wear reading glasses for near work and wear distant glasses for far work. This would mean changing glasses all day, and in most cases would be impractical.

The most logical solution of this problem, thanks to Benjamin Franklin, is the reading bifocal

(Continued on p. 13.)

COFFEE AND TEA

IT HAS been said that from a twilight-sleep birth to a narcotized death many moderns are almost constantly under the influence of one or more drugs. Lacking the energy and sense of exhilaration that comes from living a healthful life, we seek to make up the lack by getting a lift from a stimulant.

We would hesitate to put an unknown brand of oil in our car, yet we readily throw into our system drugs of which we know little or nothing, the effects of which when used continuously may be truly devastating to some part of the body structure.

Are coffee and tea harmless drinks, or do they contribute heavily to our modern nervous tension and cardio-vascular breakdowns and digestive failures?

I was startled to learn the amount of coffee consumed in some countries, for the figures are astronomical Niagara Falls is one of the wonders of the world, but the Americans have another wonder of the world in the fact that they drank more than 4½ billion gallons of coffee during 1954—enough to keep Nigara Falls flowing for nearly an hour!

Americans drink as much coffee as the rest of the world combined. In 1954 more than two billion pounds (including an estimated 500 million pounds for instant coffee) were used to make 100 billion cupfuls. That's an average of 3,000 cups a second.

In a year the average American consumer of coffee uses the total bean harvest of ten coffee trees, and at the present time coffee constitutes America's largest dollar import. The United States Department of Commerce figures reveal that in 1954 retail coffee sales alone amounted to $2,250,000,000. (Multiply by 4 75 for rupees.)

We take a lot of things for granted. Grandmother gave her sick ones beef tea as a concentrated food. Skim off the fat, and beef tea not only contains no nourishment but will starve a dog quicker than distilled water, and poison its kidneys at the same time. I suppose we will continue feeding it to sick patients even though its only real use is as a media for growing

OWEN S. PARRETT, M.D.

disease germs experimentally in laboratories.

We seldom make use of the facts gained from research that might revolutionize our health. It is more interesting to plunge into further research to turn up more facts. Our dentists tell us that a diet of natural food would give us almost perfect teeth But who wants to change his diet? It's a lot easier to dump a little fluorine into a city water system to save our teeth (even though the improvement may not be better than 60 per cent and is still being debated by good scientists on both sides).

Now to return to coffee and tea pots. I was attending a medical meeting not long ago where leading medical men were talking about the digestive tract Dr. Bargen, well-known ulcer specialist from the Mayo Clinic, told of a man in Chicago who has a hole in his stomach much like the famous Alex St. Martin. You can look inside and see what's going on He remarked that when this man takes a cup of coffee, the lining of the stomach shows an inflammatory reaction. This shows us that coffee is an irritant or stimulant to the mucous membrane.

Another eminent medical man is Dr. O. H. Wangensteen. If you have ever had a serious operation, attendants probably put a little rubber hose through your nose into your stomach for suction drainage You can thank Dr. Wangensteen for helping to invent that little life-saving contrivance. He knows a lot —both good and bad—about stomachs.

In the *American Journal of Gastro-enterology* of September, 1954, pages 181 to 191, Dr Wangensteen says: "I would say that coffee is number one on the list of things that patients who have a peptic ulcer should not take" He says further: "I have the impression that if a patient is to be treated medically for peptic ulcer he should not take caffeine in any form whatsoever."

"Well," someone says, "I don't have peptic ulcer."

Very well, let's not irritate the stomach and nerves so as to produce one.

Not so long ago a businessman came to see me in my office His busy season was on, and he was working strenuously. He became so dizzy that he could not work, so he went to a clinic for a check-up His blood pressure and heart were normal; everything seemed to be

(Continued on p. 28.)

Peptic Ulcer

KEITH W. SEHNERT, M.D.

THERE is no accurate estimate of the number of persons who daily suffer from stomach and upper-digestive disorders. Probably one out of ten patients seen in the average doctor's office has a stomach complaint. Many have ulcers or will develop them eventually. Countless others never see a doctor but treat themselves with every manner of alkalizer and antacid.

The pressure and habits of modern living affect every layer of our society. The ulcer is not the exclusive property of the business-man executive, as is popularly supposed. Smoking, drinking and eating, and inadequate rest and relaxation bring on this disorder in the factory worker as well as in the business tycoon.

Heartburn well describes the ulcer in its early stages, because it feels like a dull, burning sensation near the heart. The ulcer develops slowly over a number of months. The most common site is the duodenum (first part of the digestive tract beyond the stomach). The next most common site is the stomach near its outlet.

Although the term *ulcer* is used, the correct word is *ulcers* or *ulcerations*. There is no single spot seen. Usually there are several patches that show destruction of the stomach lining.

If a person is likely to develop an ulcer, what are the signs he will notice? "Hunger pain" is one of the first symptoms. There is pain at eleven o'clock in the morning, five o'clock in the afternoon, and in bad cases, about midnight. It is in the pit of the stomach, and may range from dull indigestion to marked pain. The distress is found to be relieved by eating food or taking alkalis.

The ulcer is getting larger if the patient can no longer control his pain by taking food or medicine. He may find himself walking the floor at night for an hour or two because of the pain. He sleeps poorly, begins losing weight, and finds it hard to do his work during the day. Hospitalization may be needed at this time.

Another sign that things are in a bad way is vomiting of blood. This means that the ulcer is bleeding. If the blood is not vomited it may pass through the digestive system and appear in the bowel discharge as a black, tarlike material. Bleeding weakens the patient, and active hospital treatment is usually needed. Perforation or penetration may occur at this time, requiring emergency surgery to repair the damage.

With the diagnosis of ulcer made by careful history, physical examination, and laboratory tests, what does the future offer an ulcer patient? Will it heal? Will it perforate? Will it turn to cancer? The answer is different for each patient, but a general outcome can be forseen.

Authorities say that for every one hundred patients with peptic ulcer fifty will heal completely and cause little trouble, forty will persist and cause some trouble or later complication, and ten will develop cancer from degeneration of the ulcer.

What indications are there to predict which ten cases will develop stomach cancer? A recent report from the large Veterans Administration Hospital at Louisville, Kentucky, by Drs. Gott, Shapiro, and Kelty showed these signs to suggest cancer: (1) an ulcer on the greater curvature (bottom side) of the stomach, (2) absence of or low amounts of hydrochloric acid in the stomach, (3) a ragged X-ray appearance of the ulcer, (4) failure to respond to treatment, especially in a person more than fifty years of age.

These doctors wanted to know which method of ulcer treatment is better, medical or surgical. After extensive study, they could find little difference in results as to the method used. They concluded that the final survival rates show little difference, and each case must be handled individually.

What can be done to prevent the development of an ulcer and the complications just described? In dealing with ulcer, an ounce of prevention is probably worth *two* pounds of cure! An understanding of the causes of ulcer goes a long way toward prevention or cure.

An ulcer usually develops only after continued abuse by the patient. Use of cigarettes, coffee, and alcohol can be found in nearly

> Stomach ulcers and other digestive ills come to us because we abuse our stomachs.

every patient with an ulcer. Abstinence from these personal habits should begin immediately, to relieve digestive distress. This is the first step.

The next step is to correct certain common personality habits among ulcer patients. We will call them the Three Horsemen—Hurry, Worry, and Flurry. These bad habits are all too common today.

Mr. Hurry has been around a long time, but has been especially active since World War II He *chews his food improperly, gulps it down, and thereby starts digestion off in the wrong manner. When his meal is eaten, it feels like a lump in his stomach. Mr. Hurry should be told to slow down and give his* stomach a chance. He should try to eat his meals at a leisurely rate in pleasant surroundings and at regular hours. Morning, noon, and night he should allow himself plenty of time to enjoy his meal.

Mr. Worry is usually fretting about something. He is commonly an ulcer patient because he lets anger get the best of him, keeps his feelings to himself, and literally stews in his own juice. Instead of doing something about what angers or bothers him, he turns it all inward. He should try to get these feelings out of his system. Action will relieve much of his anger, and his stomach won't be so abused.

Mr. Flurry comes with the pressure of many distractions that people must work with today. Most of these distractions cause anger of some degree The telephone and its demands help Mr. Flurry to ruin daily appointents, work plans, and schedules. The habit of poor planning and trying to do too much each day makes much unnecessary tension. The potential ulcer patient races with the clock to get the job finished. Fewer interruptions and lower work quotas should be planned by the person who finds that Mr. Flurry leaves his stomach in a veritable knot.

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CARE OF THE AGING

LEA WINNER, M.D.

UNLESS you live in a large city where many physicians are directory classified in the specialty they prefer, you may not have found one announcing himself as a geriatrician. Even the medical dictionaries did not carry the word *geriatrics* before 1945.

In one dictionary geriatrics is mentioned as that department of medicine which treats all problems peculiar to old age and the aging, including the clinical problems of senescence and senility, which used to be considered as beginning at seventy. But many recent specialists announce their scope as beginning at fifty and continuing through old age. The advantage of beginning treatment at fifty is that many diseases are prevented as the patient grows older.

Regular physical examinations by your physician are now considered the best prevention of certain diseases long considered incurable, because formerly diagnosis was too often delayed.

With medical examination begun by the child specialist to ensure the child's proper development and protection against the most common contagions, and with many free clinics, no one need suffer from neglect if he gives a doctor a chance.

Too often advertising proclaims the ailments of the family and prescribes a patent medicine without diagnosis. A remedy is announced as guaranteed or your money back if you are not forever relieved. If all these treatments of the sick or suffering were satisfactory, why all the sickness and suffering in the world?

Human life has been prolonged many years, on the average, with more comfort, happiness and further usefulness to the community than in the past.

Too little exercise outdoors in sunshine for the person beyond fifty robs him of vitamin D. He should be on a balanced health programme. Instead, too often he is indulging in habits that are undermining his health. Too much and too frequent drinking of strong black coffee is training the heart

to the stimulation of caffeine, which sometimes may cause a heart disease, by disturbance of rhythm, not correctible in later years." Too many workers depend on a cup of tea or coffee, with sugar or cream as the only food value, to give them energy for work until the noon hour. Coffee supplies stimulation without re-building. Some use toddy or beer.

But worst of all for the body, in my estimation, is the present self-dosage for pain and sleeplessness with barbiturates, which no conscientious doctor prescribes too frequently, fearing a habit formation in the patient. If the body is kept active outdoors part of each day, sleep is more satisfactory.

But too many people, especially women, are neglecting to keep busy at something worth while to maintain their mental processes after fifty, and to continue proper body activity. Too few people are looking for magazines and books that help in the conservation of health by suggesting right foods, activities, medical and dental care, exercise and relaxation. Geriatricians can find much to do in educating men and women to look on age as a crowning glory of usefulness.

Geriatrics will no doubt improve the health and comfort of many within the next few years. But its greatest work will be to alert younger people to the benefits of following health habits over many years, so that they will not have the problem of combating effects of intemperate lives.

There is no comparison between the bounding energies of a person who has always kept himself in good health and the unfortunate man or woman who did not know how much harm he was doing himself through over-indulgence. Maintain a high degree of health!

Modern science hopes to promise us better days when we reach the zenith years of our life.



Photo Pravin R Shah

The advantage of beginning treatment at fifty is that many diseases are prevented as the patient grows older.

DO YOU NEED BIFOCALS?

(Continued from p 9)

glass. It results in clear vision for near and distant use.

Although it is true that bifocals present a problem of adjustment when first worn, the advantages greatly outweigh any disadvantages.

Patients can see more easily and clearly than ever before. Eyestrain and fatigue are eliminated. Headache is often relieved. Frowning is displaced by calm, natural appearance. The patient is a happier and more useful member of society. He works more easily, and his work is more accurate. Even his recreation is made easier and more enjoyable, and he participates in his social activities more whole-heartedly.

Truly, when you need bifocals you should get them and wear them. They'll add to your happiness.

In Madhya Pradesh, India

blind and normal children study together

GIDEON JOHNSON

SOME social workers believe that blind children require so much special attention that they should be isolated from normal children and treated with extra care. Others think handicapped children are as much a part of the community as normal children and so should not be isolated.

The Disciple Mission School in Mungeli, Madhya Pradesh, attempts a reconciliation between the two schools of thought by adopting in one system the benefits of both without the disadvantages of either. The school admits blind children along with other children. The blind children are also taught in the same class room although they use Braille. However, when the normal children attend language classes, the blind children attend the special class where an expert teaches them "Braille language."

The only special requirement for such a system is for all the teachers to acquire the rudimentary principles of Braille to be able to teach the blind children and synchronise their work. All the teachers of the school are given special training in Braille.

They also help to transcribe in Braille short stories as well as text books for the blind.

The advantages of such an arrangement are considerable. In the normal children a broad humanitarian outlook is created and they learn to accept the handicapped as part of their own society. And the handicapped children learn to take their rightful place as a part of the community.

The blind are escorted to the school and back home by the normal children, talking and playing with them as they do with others. The school is now planning to accommodate blind children in the hostel so that they will live normally along with other children.

The arrangement, still in an experimental basis, is followed by many with keen interest. Mrs.

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Photo: U.S.I.S.

Kanta, a blind student at Mungeli school shows her braille slate to Miss Elizabeth Smieley, school manager.

"IT WAS just an idea I had one day," says Mrs. Howard Esserman in explaining the project she started two years ago to help her blind son keep up with his sighted classmates. It started with a single book, vividly illustrated with three-dimensional pictures made with materials that the child could "see" with his fingers.

Today, Mrs. Esserman is teaching volunteers in Great Neck, New York, to help her turn out many similar books as well as games, puzzles and maps for blind children of the area. Soon, she says, it may be feasible through commercial production to help a larger number of blind children.

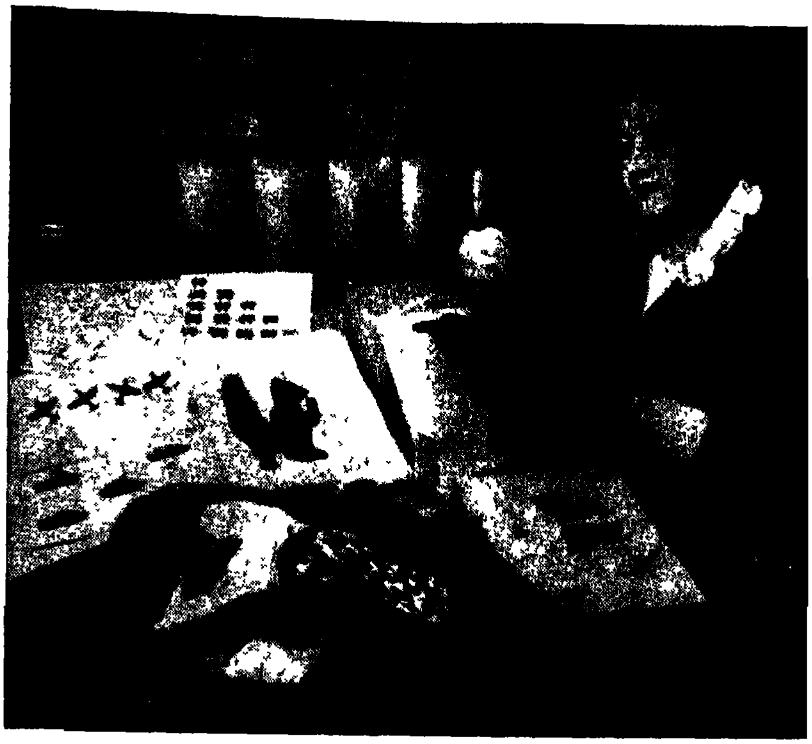


Photo USIS

Mrs. Howard Esserman makes animals "come alive" in illustrations for bli children. Here, in the basement workshop of her home, she pastes a woolly la on a board while a rabbit, made of soft fur, dries on its mounting page.

Mother's Invention Helps

blind children "see" pictures

Courtesy U.S.I.S

When Michael Esserman, who was born blind, was five years old he was sent to a local kindergarten because his family was determined that he should lead as nearly normal a life as possible Michael joined in all the games and songs with his sighted classmates, but when the children went to their pre-reading class his handicap retarded his progress. The other children learned to recognise words by associating them with pictures, but Michael's books had only the raised markings punched out by his mother who had become a certified Braillist in her determination to help the child.

This deficiency in Michael's special books became especially apparent, Mrs. Esserman recalls, one day when the teacher gave her a new book, "The Little Lost Squirrel," to transcribe for the boy. "In Braille it didn't seem to mean anything," Mrs. Esserman said. "It was a pre-reading book and depended upon its illustrations."

It was then that it occurred to Mrs. Esserman that she might substitute illustrations of appropriate texture for the water-colour sketches in the original volume. Michael soon went back to kindergarten with his Braille book embellished with squirrels made of soft fur, with bushy tails and hard little paws. Thus he began to learn word-picture associations as readily as his little classmates did.

One book followed another. On the hard board pages of Braille books, along with the raised dots that her child could read, Mrs Esserman mounted her growing list of animals. She made lions from asbestos-covered wire originally intended as pipe cleaners, used bristles to cover a porcupine, an imitation fur fabric formed h giraffes and kangaroos. As h menagerie increased, so did Mr Esserman's needs for material.

Once she told her husband sh wanted enough leather for a croco dile. He mentioned it casually to friend. The result was that instea of getting the three or four inch she needed, Mrs. Esserman wa

given enough material to fill one whole side of the basement.

As the fame of Michael's book spread, his mother was asked to illustrate books for other blind children. She was soon obliged to give up the Braille transcription and work on the volumes furnished by teachers, volunteer Braillists and church groups for distribution to sightless boys and girls of the area.

The basement of the Esserman home became a workshop and the power jigsaw that Mrs. Esserman had requested as a gift for her 20th wedding anniversary was used to cut out most of the figures. Mr. Esserman, a manufacturer of men's sportswear, and her other sons, Kenneth, 19, and Alan, 14, began to help with the illustrations.

Toy shops, variety stores, millinery supply houses and dress manufacturers contributed materials, and Mr. Esserman bought rejects from plastic novelty manufacturers to add to the stockpile. Now Mrs. Esserman has, filed in alphabetical order, boxes of beads, bells, buttons, sequins, fur scraps, leather, miniature toys and artificial flowers.

She already has produced "more books than I can count" In addition she makes wall pictures, puzzles, flash cards and games all based on the principle of appealing to and developing the sense of touch

For some time Mrs. Esserman has been teaching her process of illustration to other volunteer workers in the community. She works directly with three groups including neighbours, high school students of the Beth El Temple Junior Group, and young adults who come to her basement workshop each week. In addition, Mrs. Esserman teaches a church group and a women's club. After training other women as teachers, she comes only once or twice to supervise a new class. "In this way I can spread the technique to serve more children," she says.

Surgeons and Bone Banks

JOHN BARRY

BONE banks, where surgeons can obtain refrigerated bone of various types for different purposes, are becoming as useful an institution to the medical profession as blood banks. The bone is used by orthopædic surgeons for transplanting from one body to another and has been instrumental in effecting cures in such deforming diseases as curvature of the spine, tuberculosis of the bone, and very bad fractures.

The idea of transplanting bones from one body to another is not new, and was first done successfully by a Scottish doctor as far back as 1878, but the idea of a bank for bones is recent. Most of the experimentation started in 1946 and involved entirely new techniques never even dreamed of by the first transplanters. Today, some surgeons prefer to graft large pieces of bone rather than lots of little chips—the method used by others. One Canadian hospital has produced a bone cement which can be squirted like toothpaste; while other surgeons use bone crumbs, or even bone dust, which is obtained by putting bone through a meat grinder

The supply of bone that is kept in deep freeze comes from various sources, mostly from hospitals that specialise in amputations, and from ribs. Amputated legs are a most useful source because of the quantity of useful bone. Bone banks are now also kept fairly well supplied by material taken from corpses The most difficult task facing those who work at these banks is to strip bone of flesh, which clings with a clam-like grip. Once stripped, the bones are disarticulated, cut into convenient strips and put into preserving jars that contain a solution of penicillin and streptomycin. The jars are then put into deep freeze, where they are kept until required Some bone has been kept sterile and useful for more than two years before use.

Bone has not only to be very carefully selected before it can be pronounced satisfactory for use by a bone bank, but pathologists constantly check the solutions in which

it is kept, in order to exclude material that might be cancerous, tuberculous, or otherwise infected.

Doctors are still not sure exactly what happens when bone is grafted, although they agree that the graft, which is dead bone, forms a type of scaffolding into and around which the live bone projects new tissues, forming a new and healthy structure.

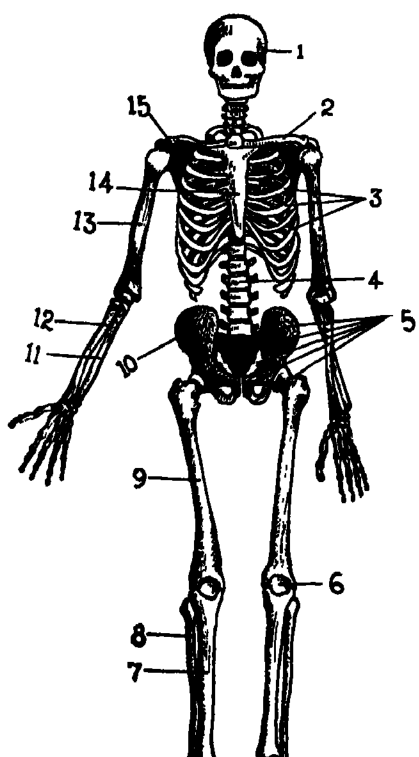
One of the most amazing uses to which bone grafting has been put was the recent case of a young English girl, Pauline Dring, whose spine curved through an angle of more than 90 degrees. When the surgeons decided to operate, the curvature was getting worse and it was feared that she wouldn't live long unless something drastic was done.

The surgeons operated on her for two hours, spreading chips of bone along the bared portions of her diseased spine. A month later more bone was grafted onto the girl's spine, and within a few months she was back at school, almost normal —a tribute not only to bone grafting but to the increasing importance and vital necessity of bone banks.

Bone grafting has been practised in the United States for many years, and it was in fact an American, Dr. Phillip D Wilson, who first installed a deep freeze unit at the New York Hospital for Special Surgery in 1946 He was the first to use human bone stored in a "bank" for surgical purposes

But long before this, bone grafting had reached a high degree of technical excellence in the United States, the main exponent being Dr. Fred Albee, who received his inspiration from watching tree grafting on his grandfather's farm He first tried bone grafting on animals before he turned his new skill to human beings

Dr. Albee has performed some 30,000 operations and more than 7,000 bone grafts during his career Once, at the University of Vermont he performed no less than 25 operations in one day He has designed about 100 new surgical techniques based on the principle of bone grafting. Before the First World War the Germans invited Dr. Albee to come to Germany to demonstrate his bone grafting techniques He accepted, and the Germans learned a lot from him which they put to good use during the ensuing war.



1 Skull
2 Collar Bone
3 Ribs
4 Spinal Column
5 Pelvis
6 Knee Cap
7 Tibia (Shin Bone or Larger of Lower Leg Bones)
8 Fibula (Smaller of Lower Leg Bones)
9 Femur (Thigh Bone)
10 Hip Bone
11 Ulna (Smaller of Bones of the Fore-arm)
12 Radius (Larger of Bones of the Fore-arm)
13 Humerus (Arm Bone)
14 Sternum (Chest Bone)
15 Shoulder Blade

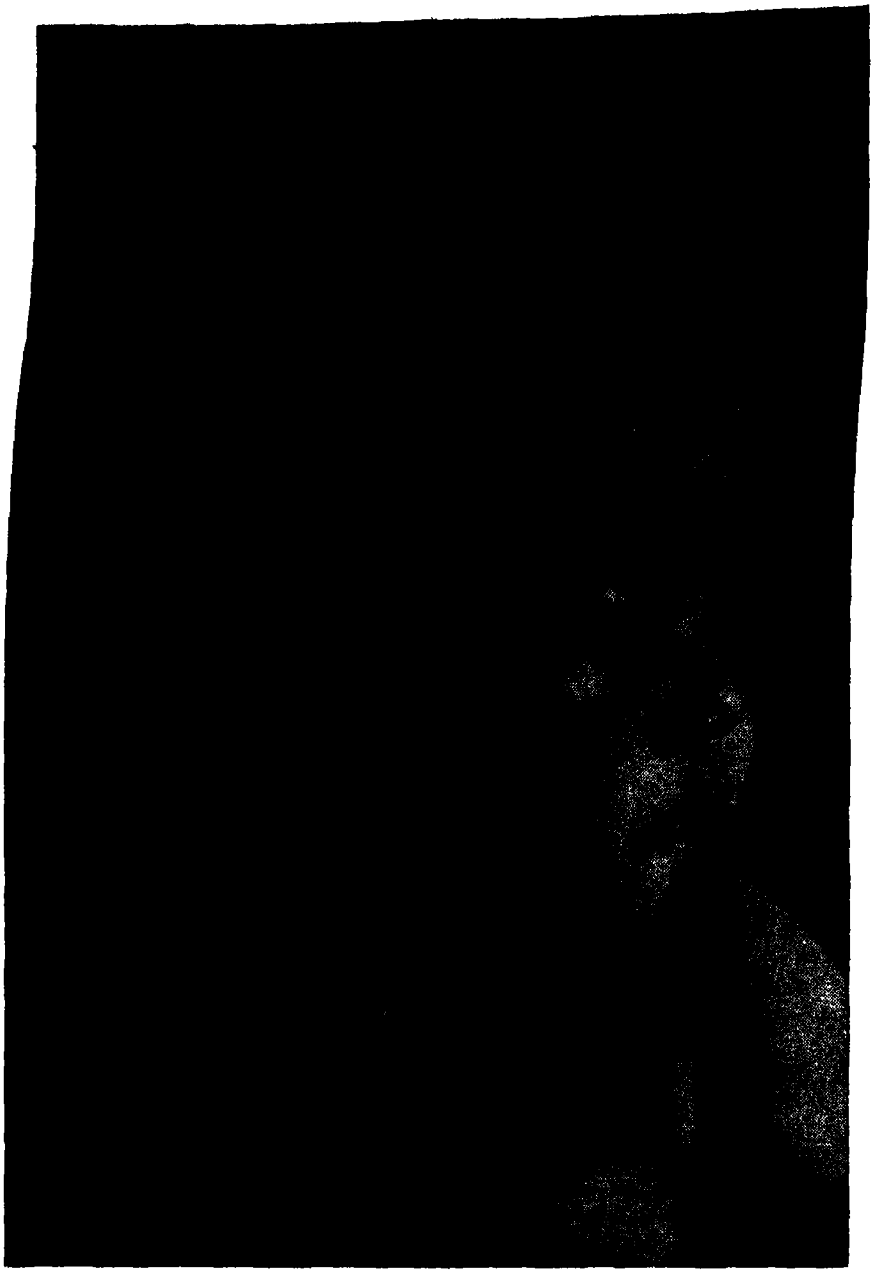
Dr. Albee is a great believer in rehabilitation for people who would under normal circumstances be cripples. He says that rehabilitation is a good investment for it costs far less than to maintain a disabled man or woman in a public institution. This was especially true after both the First and Second World Wars.

One of his most difficult and successful operations was a graft he performed on an actress's face She had been involved in an automobile accident which had shattered her jaw, nose and cheekbones, leaving her face in ribbons He took a piece of curved bone from her pelvis and grafted it onto her jaw. Further bone grafts were used to re-shape the contours of her nose and cheeks, while plastic surgery did the rest. When the series of operations was over she returned to the stage, and it was almost impossible to detect her former injuries.

Then there was a man named MacNeal, who had his jaw shot away almost completely so that his tongue practically rested on his Adam's apple. Dr. Albee replaced the missing parts of the chin and cheek by a graft from soft tissues of the shoulder He re-built the chin from a graft taken from the pelvis, which he morticed into the remains of the jawbone, proving again his assertion that bone grafting is merely a form of advanced carpentry.

Dr. Albee found that grafted bone had remarkable growing properties. In one case, a soldier had about eight inches of his thigh

(Continued on p. 28.)



••••••*Your*

B

RUTH BOYER SCOTT

Photo: A. V. Ramamoorthy

He has feelings he can't tell you about . . .

YOUR baby has a secret life. He has feelings he can't tell you about; he has ideas he can't put into words. The U. S. Children's Bureau has pooled the findings of men and women who spend their lives studying children.

You can learn to read your baby's secret life. "He has a way of telling. He uses his whole body, all of him, all of his behaviour, everything, to let you know," the Children's Bureau tells you. Your study of him, your sympathy, teaches you this secret language. But you will find life with him easier if you read these cues. They are like a light turned on in a dark room. "His eagerness and persistence and his continuous searching will tell you his needs," these experts say.

You can see it vividly when a new-born baby tries to nurse. His wobbly head bobs this way and that, his rose-bud mouth works as he nuzzles your breast for the nipple. How marvellous, you think, that a new-born baby knows what he wants.

How can you tell when you have met his needs? "His great peace and contentment when he has what he needs will tell you," say the experts. "His restlessness when he is not getting what he needs is a sign language you can read."

Look at the new-born baby again. Did you ever see a more peaceful face than that of the dry, just-fed baby? It tells you that you have met his needs, have understood his secret language.

What if you've fed the new baby and he is crying or tossing and fretting? Is an air bubble making his tummy hurt? Not quite enough breast milk to fill him? A formula that isn't a comfortable substitute for the breast milk he would prefer? You're up against a harder problem now. His language says, "Mother, I need you to do something for me." You have to find out what. The miracle is that most young mothers are geniuses at finding out.

When the secret language is too baffling they get good help from their family doctor, pediatrician, or visiting nurse.

But the Children's Bureau gives you this important insight: Beyond the need for milk, vitamins, and dry diapers, babies have a tremendous personality need. Hospitals that gave babies all the proper physical care learned that they still didn't thrive. They had a personality need that someone—Mother or nurse—must fill.

Here is the personality need:

always has to be on the lookout?"

Suppose you put your baby into a highchair before he shows he's ready by sitting up alone in his crib. He bangs his head, or his back aches because it isn't strong enough for the weight of his body and head You've hurt more than his body, which can stand quite a bit of punishment You've hurt his personality, his deep need to trust his world If you frequently push him beyond his body strength, he may develop a tendency to cry in elevators when he's older, cry when he first goes to school. You've taught him the lesson that his body is tricky.

The Children's Bureau says, "Just like the rest of us, if he can feel that the New is trustworthy, then he can relax He doesn't have to be jittery—either fighting all the time because this world is an enemy or frightened all the time because he cannot trust the world."

Don't rear a scared boy or girl. Don't rear a jittery boy or girl Instead, help them grow with happy personalities. The Bureau suggests, "Your love carries this sure feeling. 'Everything is O. K.' You don't

...cret Life......

"A feeling that his world is all right, a sense of trust from being in it." Your baby is in a new place, He has left his safe, dark, warm world Young mothers know how he feels when they remember how strange they felt at being a bride, at living in a new place with a new husband.

Your baby has more to learn as a new person than you had as a bride. The Bureau tells you: "He, too, is new to him. He cannot even be certain what he can do. Will his body serve him? Is it faithful and reliable, or tricky, so that he



Photo Vidyavrata

. . . he has ideas he can't put into words

have to make any special point of it. All the kindly attentions that are so easy to give to babies bear the message."

Here are a few pleasant attentions:

1. *Your smiles give him confidence. How delightedly he wriggles as he smiles back at you.*

2 *Your appreciation helps* You make up happy little songs as you carry him to his bath "Johnny's a good boy. Daddy loves him, Mummy loves him. Everybody loves Johnny." He doesn't know words, but he understands appreciation.

3. The warm holding when you nurse him. If he's a bottle baby, the equal warmth of your holding him. Day in and day out your baby needs you to hold and love him while he takes his bottle

4. Your willingness to comfort your baby when he cries, to change him when he is wet, helps his personality. What is par in the changing business? It differs a little with babies Perhaps twelve to fifteen changes in the wash every day are typical. A nurse who cares for newly operated babies changes them about twenty-four times in the twenty-four hours She gives her operated babies unending love and attention in order to almost eliminate the need for pain-killing medicine The well baby doesn't need that many changes. If your baby has a tender skin that gets a rash easily, he needs more changing than the baby with a less tender skin.

5. Let him do things for himself. "The reaching out for toys, the trying to crawl, the first standing up tell him that his body is a friend," the Children's Bureau says

You're not spoiling him; instead, you're giving him a happy personality, if you "comfort him, when he wants you to When he asks for your helping hand, accept the fact that he does and give it to him This will not make him soft; it will give him the courage to grow"

Know Your Vegetables

EVERYBODY agrees that success with vegetables is in the cooking. Get the best out of them, and everyone will enjoy their delicious flavours. Their delicate tastiness will not lead you to overeat, as all of us are tempted to do when eating strongly flavoured foods. Cook them carefully, and you will preserve both flavour and food value.

The food value of root vegetables lies close to the skin, so it is better to scrub, not pare, them. If you must pare them, pare as thin as possible, please. Occasionally we must prepare vegetables for cooking some time before they are to be cooked. But let us not do this habitually, for we save precious minerals and vitamins by preparing them just before cooking.

Cook vegetables in as large pieces as possible, in as little boiling, salted water as possible, and keep the pan covered during the cooking process. Of course spinach and other greens lose their bright green look when cooked this way But if you cook with cover off, there is a mineral loss. We cook greens only in the water that clings to them after washing. And we don't overcook.

You know, we should learn something new every day. I did this when reading an article on vegetable cooking that said vegetables should be cut lengthwise, that minerals and vitamins are lost if they are chopped or sliced. Drain vegetables immediately when done, and keep the liquid for soups, gravies, and roasts.

Dried peas and beans are washed, soaked overnight in cold water, and cooked in the same water they were soaked in. Bring them to boiling, then reduce heat and cook slowly.

Now as to methods of cooking vegetables. The most food value is preserved when they are steamed. This can be done in a steamer over boiling water, or, if you are fortunate enough to own one, in a pressure saucepan. Baking is second in preservation of food value, and boiling is last of all.

Vegetables strong in flavour, such as cabbage, onions, broccoli, cauliflower, and Brussels sprouts, should be cooked in a small amount of boiling, salted water, tightly covered But if you wish them to be more mildly flavoured, you may cook them uncovered in a bit more water.

There's a big difference in carrots We had some last year that were raised on muckland, and they were beautiful, but tasteless. I like smaller, sweeter carrots. I like them boiled as mentioned above, and served with a little butter, but my favourite way to serve sweet, golden carrots is in salads.

To cook turnips as your family will enjoy them, try cooking a few with potatoes and mashing them together. Fold a little whipped cream into the mashed vegetables, and put a trickle of butter on top

Onions can be partially boiled, then stuffed and baked. Cauliflower can be creamed or buttered and served with a cheese-flavoured sauce. In an ad I recall having seen last summer a cauliflower was cooked whole, cooled, and spread with mayonnaise. Ripe olives were stuck in here and there, making a polka-dot effect.

Don't just stick to a few old-favourite vegetables. Try Brussels sprouts, broccoli, eggplant, parsnips, and okra. Try different sauces on vegetables. Add mushrooms to some, use hollandaise sauce, and herbs in flavouring. Try steaming banana squash. It will take from one to one and a half hours. Then remove squash from shell, mash, and season. You may add chopped nuts for variety of flavour. Nuts add something to almost any dish.

THE EDITOR DISCUSSES

(Continued from p 5.)

gets out of order we begin having difficulty with everybody and everything. Again, the high cost of neglect!

How frequently children are neglected by their parents Parents fail to give the attention to the children that they should give to them, with the result that the children find their companionship elsewhere They obtain their friends and their confidants outside of the home They are not instructed morally as they should be. They are not given the spiritual upbringing that they should be given. They are not given the education that they should have. And then not only those children, but the family and society have to pay for the high cost of parental neglect

Yes, even as the old story goes, the battle was lost for want of a nail! How unfortunate, but how true!

So many of us today are just like the messenger in that old story We neglect the little things. We neglect to give attention where attention is due, and the result is long-lasting damage and irrepairable harm.

Don't neglect your health! It can be very costly

BLIND AND NORMAL CHILDREN STUDY TOGETHER

(Continued from p 14)

Sukhnandan is in charge of the project. She is a graduate of Lucknow University and holds a diploma in social science from the Tata Institute of Social Sciences, Bombay, and also a master's degree in education from Boston University. She was interested in the education of handicapped children, especially the blind, and so was awarded a Fulbright grant to go to the United States. She spent a year and a half at the Perkins Institution for the Blind in Watertown, Massachusetts, the very first institution opened in the U. S. A for the education of the blind. There she not only observed but assisted in teaching the blind

After she had received her degree, the John Milton Society arranged for her to visit other schools and workshops for the blind on the eastern sea-board in the States. On her return she started this small but new programme of admitting blind children in Class I of the Mission Primary School in Mungeli A partially blind teacher is engaged to teach children the reading and writing of Braille. This teacher has had training in the Training Centre for Adult Blind in Dehra Dun He also teaches children cane work as well as weaving. An aluminium Woonsocket handloom has been sent by the United Christian Missionary Society, Indianapolis, Indiana, to help in the rehabilitation and education of the blind.

THE CONTROL OF COMMUNICABLE DISEASES

	CHICKEN POX	DIPHTHERIA	MEASLES	GERMAN MEASLES
PRINCIPAL SIGNS AND SYMPTOMS	Begins with fever and sometimes a slight chill Eruption appears within 24 hours as raised red spots beginning on the forehead and face, which, within a few hours, are filled with a clear fluid which soon becomes cloudy These shrivel and within three or four days *form dark brownish crusts which fall off in about 14 days, and, as a rule, leave no scar*	Begins slowly or rapidly. Sore throat, patches may show on throat or tonsils. Sometimes symptoms very slight	Begins like head cold, running nose, watery inflamed eyes, sneezing, fever. Rash appears as spots about third day, usually first on forehead and face Spots may disappear if air is cold, and with warmth come out again	Usually mild, may be chilliness, headache, pains in the back and legs, and running nose. Rash appears on the first day, first on the face, then on the chest gradually extending over the whole body. The rash may be the first symptom. It consists of a number of round or oval slightly raised spots, pinkish red in colour, somewhat brighter than in measles
SOURCE OF INFECTION	*The infectious agent is presumably present in the lesions of the skin and of the mucous membranes, these, appearing early and rupturing as soon as they appear, render the disease communicable early, that is, before the skin eruption is in evidence*	Discharges from diphtheritic lesions of nose, throat, and other mucous surfaces. Secretions from the nose and throat of carriers of the bacillus	Secretions from mouth and nose of an infected individual	Secretions of the mouth and possibly of the nose.
MODE OF TRANSMISSION	Directly from person to person, indirectly through articles freshly soiled by discharges from an infected individual	Directly by personal contact, indirectly by articles freshly soiled with discharges, or through infected milk or milk products	Directly by person to person; indirectly through articles freshly soiled with the discharges from mouth and nose of an infected individual The most easily transmitted of all communicable diseases	By direct contact with the patient or with articles freshly soiled with the discharges from the nose or throat of the patient
INCUBATION PERIOD	Two to three weeks	Usually two to five days, occasionally longer if a healthy carrier stage precedes the development of clinical symptoms	About ten days	From 14 to 21 days.
PERIOD OF COMMUNICABILITY	Until the primary scabs have disappeared from the mucous membranes and the skin	Until virulent bacilli have disappeared from the secretions and the lesions The persistence of the bacilli after the lesions have healed is variable In fully three-quarters of the cases they disappear within two weeks In 95 per cent of cases, the bacilli disappear in four weeks	During the period of catarrhal symptoms and until the cessation of abnormal mucous membrane secretions—minimum period of nine days, four days before to five days after the appearance of the rash	Eight days from onset of the disease
METHOD OF CONTROL: (A) The infected individual and his environment 1. Recognition of the disease	Clinical symptoms The differential diagnosis of this disease from smallpox is important, especially in people over 15 years of age.	By clinical symptoms with confirmation by bacteriological examination of discharges.	Clinical symptoms Special attention to rise of temperature and catarrhal symptoms in exposed individuals	Clinical symptoms
2. Isolation	Exclusion of patient from school, and prevention of contact with non-immune persons	Until two cultures from the throat and two from the nose, taken not less than 24 hours apart, fail to show the presence of diphtheria bacilli.	During period of communicability	Separation of the patient from non-immune children, and exclusion of the patient from school and public places for the period of presumed infectivity.
3. Immunization	None	Exposed susceptibles to be promptly immunized by antitoxin. (By susceptibles is meant such individuals as are found to be non-immune by the Schick test, i.e., those who give a positive reaction.)	Use of serum of whole blood of convalescent measles patients, or of any healthy adults who have had measles, given within five days after exposure to known case of measles either prevents or modifies the disease	None
4. Quarantine	None	All exposed persons until shown by bacteriological examination not to be carriers	Exclusion of exposed susceptible school children and teachers from school until 14 days from last exposure This applies to exposure in the household	None
***5. Concurrent disinfection**	Of articles soiled by discharges from lesions.	Of all articles which have been in contact with the patient and all articles soiled by discharges from the patient	All articles soiled with the secretions of the nose and throat.	Discharges from the nose and throat of the patient and articles soiled by discharges
(B) General measures	None	1. Pasteurization of milk supply. 2. Application of the Schick test to all, especially to exposed persons, such as nurses and physicians, and active immunization of all susceptibles 3 Active immunization of all children by the end of the first year without prior Schick testing; active immunization of school children with or without prior use of the	1 Daily examination of exposed children and of other possibly exposed persons. This examination should include the record of the body temperature. A non-immune exposed individual exhibiting a rise of temperature of 0.5°F or more should be promptly isolated pending diagnosis. 2. Schools should not be closed where daily observation of the children by a physician is provided for.	None. Note—The reason for attempting to control this disease is that it may be confused with scarlet fever during its early stages; each person having symptoms of the disease should therefore be placed under the care of a physician and the case should be reported to the local department of health. Schick test.

***Concurrent disinfection—Daily disinfection during the course of the disease**

THE CONTROL OF COMMUNICABLE DISEASES

MUMPS	INFANTILE PARALYSIS	SMALLPOX	SEPTIC SORE THROAT	WHOOPING COUGH
...etimes begins suddenly with sickness and ...r Pain upon opening mouth and about ...le of the jaw, ...re glands become ...llen and tender	Onset frequently mild, fever, headache, vomiting, and constipation usual symptoms, also pain on being handled. Frequently the nature of illness not recognized until the development of sudden weakness of a group or groups of muscles, most frequently in the legs.	Usually begins in adults with a child and in children with a convulsion Intense frontal headache, severe pains in the back, vomiting, and fever Rash appears usually on the fourth day as bright-red spots on the forehead and on the anterior surfaces of the wrist, which disappear completely on pressure These become elevated by the fifth or sixth day and are filled with fluid (vesicles). About the eighth day the vesicles are filled with matter (pustules)	Usually fever with painful and inflamed throat. The tonsils are enlarged and congested and may present patches of thick mucus simulating those of diphtheria.	May be mild at first. Cough usually worse at night Spasms of coughing with "whooping" develop in about two weeks Spasm of coughing often ends with vomiting
Secretions of the mouth and possibly of the nose	Nose, throat, and bowel discharges of infected persons or articles recently soiled therewith Healthy carriers are supposed to be common.	Lesions of the skin and mucous membranes of infected persons	The human nose and throat. The udder of a cow infected by the milker is a common source of infection	Discharges from the mouth and nose, and bronchial mucous membranes of infected persons (sometimes also of infected dogs and cats, which are known to be susceptible)
By direct contact with an infected person or with articles freshly soiled *with the discharges* from the nose or throat of such infected person	By direct contact with an infected person or with a carrier of the virus, or indirectly *by contact with articles* freshly soiled with the nose, throat, or bowel discharges of such persons, or through contaminated milk.	By direct personal contact, by articles soiled with discharges from lesions The virus may be present in all body discharges, including fæces and urine. It may be carried by flies	Direct or indirect human contact, consumption of raw milk contaminated by case or carrier or from an infected udder	Contact with an infected person or animal or with articles freshly soiled with the discharges of such person or animal.
From 12 to 26 days The most common period, 16 days, accepted as usual. A period of 21 days is not uncommon	Uncertain, but believed to be from three to ten days, commonly six days.	Eight to 16 days (Cases with incubation period of 21 days are reported)	One to three days	Commonly 7 days; almost uniformly within 10 days.
Unknown, but assumed to persist until the swollen glands have returned to normal size	Unknown, apparently not more than 21 days from the onset of disease, but may precede onset of clinical symptoms by several days	From first symptoms to disappearance of all scabs and crusts.	In man, presumably during continuance of clinical symptoms, in the cow, during the continuance of discharge of the streptococci in the milk, the condition in the udder tending to a spontaneous subsidence The carrier stage may follow convalescence and persist for some time	Communicable in the early catarrhal stages before characteristic whoop makes the clinical diagnosis possible Catarrhal stage occupies from 7 to 14 days. After the whoop has appeared, the communicable period lasts for three weeks.
The diagnosis is usually made on swelling of the parotid gland, under the angle of the jaw	Clinical symptoms, assisted by chemical and microscopical examination of the spinal fluid	Clinical symptoms Tests for immunity may prove useful	Clinical symptoms. Bacteriological examination of the lesions or discharges from the tonsils and nasopharynx may be useful.	Clinical symptoms supported, when possible, by bacteriological examination of throat discharges as early as one week before the development of the whoop
Separation of the patient from non-immune children, and exclusion of the patient from school and public places for the period of presumed infectivity (See 5).	Of all recognized cases for three weeks from onset of fever	Hospital isolation in screened wards, free from vermin, until the period of infectivity is over	During the clinical course of the disease and convalescence, and particularly exclusion of the patient from participation in the production or handling of milk products	Separation of the patient from susceptible children, and exclusion of the patient from school and public places, for the period of presumed infectivity
None	None	Vaccination	None	Use of prophylactic vaccination recommended by some observers Not effective in all cases
None Exposed susceptible persons should be regularly inspected for the onset, the presence of initial symptoms, for three weeks from the date of last exposure	Of exposed children of the household and of adults of the household whose vocation brings them into contact with children, or who are food handlers, for 14 days from last exposure	Isolation of all contacts until vaccinated with virus of full potency Daily medical observation of all recently vaccinated contacts until height of reaction is passed, if vaccination was performed *within 24 hours of first exposure,* otherwise for 16 days from last exposure	None	Limited to the exclusion of non-immune children from school and public gatherings for 10 days after *their last exposure to* a recognized case
All articles soiled with the discharges from the nose and throat of the patient	Nose, throat, and bowel discharges and articles soiled therewith	Of all discharges and articles soiled therewith	Articles soiled with discharges *from the nose and throat of* the patient.	Discharges from the nose and throat and articles soiled with such discharges.
None	1 Search for an examination of all sick children should be made 2 All children with fever should be isolated pending diagnosis 3 Education in such technique of bedside nursing as will prevent the distribution of infectious discharges to others from cases isolated at home	General vaccination in infancy, re-vaccination of children on entering school, and of entire population when the disease is prevalent Note —Vaccination before the age *of six months* is particularly desirable	1 Exclusion of suspected milk supply from public sale or use, until pasteurized The exclusion of the milk of an infected cow or cows in small herds is possible when based on bacteriological examination of the milk of each cow. 2 Pasteurization of all milk 3 Education in the principles of personal hygiene and avoidance of the use of common towel, drinking and eating utensils.	Education in habits of personal cleanliness and in the dangers of association or contact with those showing catarrhal symptoms with coughs

STORY TIME

JOKER JOE

PEGGY HEWLETT

MANY long years ago there was a story in one of the first readers in school which I have never forgotten Perhaps you have read it too.

It told about a young lad who got a great deal of fun out of fooling people.

The wolves were particularly bad at the time he lived, and were continually attacking the sheep. The men grew tired having to sit up all night watching for them, as well as working all day. So they hired this fellow to stand guard at night, for he could sleep all day if he wished.

Of course, they knew he'd have a hard time fighting a pack of wolves by himself, so they told him that the minute he saw the wolves approaching he was to shout, "Wolf!" and they would come to the fight.

The boy said he would do just what they had told him and the men, greatly pleased, went off to bed and to sleep.

The boy stood guard as he had promised But it was very still and quite out there, and the night grew long. Presently he thought he would play a little joke on the men.

Cupping his hands to his mouth he shouted, "Wolf! Wolf!"

At once there was a stirring in all the houses, and within minutes doors were being flung open and men were running down the street toward him, waving sticks and clubs

"Where are the wolves, boy?" they shouted.

But the boy just laughed at them. "Ha, ha, ha," he said. "There wasn't any wolf. What a joke!"

The men weren't very happy about it, I can tell you, as they went back to bed

The next night the boy tried the same "little joke." Once more the men came tumbling out of their beds, chasing after the wolves. And once more they found nothing but the boy laughing at them.

Well, the third night, as the boy was watching, he saw a shrub move slightly over on the far side of the flock, right on the edge of the forest

A moment later a dark form slipped from the shadows, followed by another, and another A whole pack of wolves was attacking the sheep!

"Wolves!" the boy cried. "Wolves! A whole pack of them!"

But there was never a sound from the village. The men heard him shout, all right, but they just smiled and went back to sleep They weren't going to be fooled by that joker again!"

Just how many sheep were taken, or what happened to the boy, I do not know. But if he was carried off by the wolves it would only have served him right, wouldn't it?

Something very much like this happened in one of the world's largest cities just a few weeks ago, with terrible consequences

Joe was a fellow who was always "larking about." He worked in a factory and spent a great deal of time having jokes at someone else's expense. Everyone called him "Joker Joe." A few months ago an explosion shattered the second floor of the factory Glass showered in

Camping Coaches for Holiday-Makers

The Indian railways will shortly provide camping coaches at a few selected stations for the convenience of rail travellers on holiday.

The Estimates Committee of Parliament had some time ago recommended that this experiment should be tried out on the models of similar camping coaches provided by the British railways.

The Railway Board has advised the Railways that unserviceable passenger coaches should be utilised for this purpose, and these should be specially fitted up to provide the necessary conveniences.

The stations where these camping coaches will be made available will be decided by each Railway Administration, but these would preferably be stations which do not have retiring rooms.

The internal fittings will be the same as in first class coaches. An attendant will be provided to look after these coaches. Generally speaking, the rules in force in the case of retiring rooms would be applicable to camping coaches also Cooking will not be allowed in these coaches.

Nominal charges have been fixed. A four-berth compartment would be allotted for Rs. 4.00 and a coupe for Rs. 2.00 for every 24 hours or part thereof. Normally, compartments will be reserved for a maximum of 72 hours at a time —P.I.B.

all direction, leaving gaping windows which soon belched smoke and flames

As the fire raged upward, men and women on the third floor rushed head-long to safety. But surprisingly enough, the workers on the fourth floor paid no attention to the destruction and terror below. Perhaps the drone of machinery drowned the noise.

Joe remembered his workmates upstairs and gallantly forced his way through the suffocating smoke. With all his strength he shouted, "There is a fire. Follow me!"

But the workers had been caught by Joe's jokes before. They weren't going to be caught by this one They paid no attention.

Then tell-tale wisps of smoke seeped through, and with horror they realized that the boy was not fooling this time!

Pandemonium let loose The factory boss tried to reach his trapped staff but was forced back with burns Some of the girls managed to make their way down the smoke-clogged stairway Firemen in breathing apparatus saved a few more, but three women were trapped in the angry flames.

By this time the streets below were teeming with hundreds of people from the district around. Eighty firemen were fighting desperately.

A young girl of eighteen appeared at a fourth floor window Some of the crowd shouted to her to climb the stairs up to the roof. But prodded by the terror of being trapped, she jumped—fifty feet—to her death!

The two other victims were found later. One was a young widow who leaves a little daughter

I wonder if Joe will ever play a practical joke again? Fun has its place, but, like everything else, it can be carried too far How much heartache and lifetime regret could have been avoided if *Joker* Joe had been *Dependable* Joe instead!

WORKING WITH "GINGER"

Part II

CHARLES K. TAYLOR

(SYNOPSIS: Ginger was not his real name, but it was what "the fellows" called him.

"Why do you call him 'Ginger'?" I asked one of them.

"Oh," he replied, "because he isn't"

Ginger hated running, but he could not well refuse a challenge to run. He was fourteen He was beaten outrageously; for he fell with exhaustion before the race was more than half over.)

He was angry, and as soon as we were alone he wished to know what was the matter with him. His apathy had vanished, and there was a much more hopeful type of boy on hand—a highly enraged youngster whose vanity had been touched and who was anxious to do something about it right away.

This chance was too good to be lost. "What's your chest expansion?" I asked.

When he found what it meant, he promptly stripped to the waist and had chest expansion measured It was exactly one inch—no more For his size it should have been three times that at least

I described a simple but effective breathing exercise, and stipulated that he should walk at a rapid pace such and such a distance each morning. Then I measured his shoulders and arms. Measuring of this kind interests boys hugely. Also I took a photograph of his "profile" as he stood there, stripped to the waist; and then I sent him home

Next afternoon he reported having done his walk and his exercise. I showed him the photograph taken the day before. There before his very eyes were his flat chest, his stooped shoulders, his prominent shoulder blades, and his protruding abdomen. He looked at the photograph with disgust, and this was doubled when he saw another photograph lying on the table, left there for that very purpose This was also a "profile"—that of a lad of the same age, who carried himself like a soldier and who showed a muscular development of no mean quality.

The stimulus of his defeat, of the physical measuring, and finally of those two photographs kept him going over a week. When his interest began to flag, another photographic exhibition aroused him promptly. For a month he did his breathing exercises faithfully, and then he was measured again This time his expansion was two inches and a half!

He was given more exercises, something was said about early hours, and he got a lecture on things which might prevent his gaining a first-class development.

He took his extra exercises, and as a result of increased outdoor exercise, self-confidence, and self-respect, there developed a diffrent and better outlook toward life. His mind became filled with new and better thoughts; his school work became really respectable; his moroseness disappeared, and finally came cheerfulness and good humour.

I lost track of Ginger just before he was sixteen years old and did not hear another word about him till last spring, when I received as beautiful a letter from him as I have ever had written to me. He was then twenty-one and making a good living as a writer.

HOMEMAKERS' HELPS

SWEETS

M. Ninaj Larson

OFTEN adults are responsible for building in children a craving for sweets. In some cases this craving becomes almost overpowering. We believe that ignorance on the part of the adults is responsible.

Sweets consist primarily of large quantities of sugar, and in many cases also of large quantities of fats. The body needs sugar and fats to provide energy But it needs these foods in carefully controlled amounts, and as far as possible, they should be supplied to the body in natural foods.

Some homemakers feel that the chief meal of the day is not complete unless a sweet dessert is served. But countless homemakers have proved over and over again that a wholesome tasty meal is satisfying in itself and does not call for any artificial concentrated sweet at its end. Children who come from such homes have no craving for sweets and usually find it difficult to get through the average sweet dessert.

When we eat freely of sweets several things happen As any dentist will readily testify, sweets are largely responsible for cavities in teeth As soon as there is a change-over to grains, fruits, nuts, vegetables, and milk in its varied forms, the teeth show the effect of the good diet and of the absence of artificial sweets.

The body needs just such food for growth and to repair the body tissues which are constantly breaking down with every movement of every organ

The food that we eat is transformed into blood. The various organs and parts of the body take from the blood those elements that they need for their growth and repair. Too much sugar and fat in the body interferes with this work and only clogs the system. If we are careful to lessen the sweets, we would not so often have to purchace our minerals and vitamins at the Chemists, for we would get them in our food.

Sweets, especially when eaten between meals, take away our appetite for wholesome nourishing food. A child that has been sucking on barley sugar has no taste for a good wholesome vegetable salad or a chapatti. This is one way that poor appetites are developed The result is a poorly developed, under-nourished individual.

Frequently sweets are eaten between meals. When anything is eaten between meals, the process of digestion is retarded. The stomach just keeps on working. Such should not be the case. All food should be taken at regular times with about five hour intervals between meals When this habit is followed, the food has sufficient time to digest, and the stomach has peace and quiet and rest. Thus it is kept in a

(Continued on p. 27, col. 3)

RECIPES

Date Crumble

Eggs, seperated, 3; Sugar, ½ cup, Chopped dates, 1 cup; Chopped walnuts, ½ cup; Bread or cracker crumbs, 1 cup (Dry cake may also be used.)

Beat egg whites until stiff, add beaten yolks Add remainder of ingredients Bake about 30 minutes in moderate oven (350° F.) Crumble. Serve with whipped cream. Approximate yield 6 servings

Date Fruit Cup

Orange sections, 1 cup; Dates, chopped fine, ½ cup, Thin slices of unpared apple, 1 cup; Lemon juice, 2 tablespoonfuls, Orange juice, ¾ cup.

Combine the orange sections, apple slices, and dates. Pour the mixed orange and lemon juice over all. Chill thoroughly. Approximate yield: 6 servings.

Raisin Rice Pudding

White rice, uncooked, 4 tablespoonfuls, Milk, 1 quart; Salt, ¼ teaspoon; White corn syrup, ¾ cup; Seedless raisins, ½ cup, Butter, 1 tablespoonful; Vanilla, ½ teaspoonful; Boiling water, 1 1/3 cups.

Combine rice, salt, butter and water in saucepan. Simmer covered about 15 minutes, or until all water has been absorbed by rice, stirring occasionally. Then add the milk, corn syrup, and raisins. Simmer, uncovered, about 55 minutes longer, stirring occasionally. Keep the kernels of rice whole if possible Remove from heat, add vanilla, and pour into a casserole Brown in hot oven of 425° F. 20 minutes Serve warm or cold. Yield: 6 to 8 servings.

(Continued from p. 26, col. 3.)

RECIPES (CONCLUDED)

Orange Fruit Cups

For each serving, peel and section 1 medium or large orange. Combine with grapes, banana slices, and raspberries, 3 or 4 of each. Cover with orange juice saved in preparing sections. Sweeten to taste.

Orange Fruit Cup becomes a delightful dessert.

For a simple, quickly prepared appetizer or dessert, serve orange juice (sweeten or not, as desired) over one of the following fresh fruits: melon balls, berries, bananas, pears, peach slices, or grapefruit sections.

Fruit Mould

Assorted fruits; Light-coloured fruit juice, 2 cups; Berry juice, ½ cup, Lemon juice, ¼ cup; Cold water, ½ cup; Powdered agar, 2 tablespoons, Cold water, ½ cup; Boiling water, 1 cup; Pineapple, peaches, pears, bananas, etc.

Arrange an assortment of fruits, well drained, in a bowl. Mix the fruit juices and ½ cup of cold water in a separate bowl. Measure 2 level tablespoons powdered agar. Put in small saucepan and dilute with ½ cup cold water, then add the boiling water. Bring to the boiling point and cook only 1 minute, then add to the fruit juices, mix and sweeten to taste. Strain and pour over the fruit in the bowl, a little more than to cover the fruit, and set aside to get firm. Serve with whipped cream. Yield: 4 to 6 servings

Baked Creamy Rice Pudding

Uncooked rice, 3 table-spoons; Milk, 1 quart; Nutmeg, ½ teaspoonful; Sugar, 1/3 cup, or 2/3 cup corn syrup; Raisins, if desired, ½ cup; salt, ½ teaspoon.

Wash rice and stir into the remaining ingredients. Pour into a greased baking dish and bake for 2½ to 3 hours, or until done, in moderate oven (300° F.) Stir 3 or 4 times during the first hour. Approximate yield: 4 servings

Nut and Fruit Marmalade

Cover a plate with a thick layer of finally chopped raisins Then add another layer of about the same thickness of almonds, next one of ground figs and then one of walnuts, finishing with raisins. Press firmly together, and slice with a sharp knife Serve with whipped cream.

Apricot Fluff

Beat egg whites until stiff Fold in gradually ¼ cup of honey and 1 cup of apricot pulp (made by forcing Tinned or stewed dried apricots through a sieve). Add a little lemon juice to taste and serve in sherbet glasses. Garnish with whipped cream or chopped nut meats.

Hawaiin Tropic Salad

One cup watermelon, crushed, ½ cup orange sections in agar; 1 cup fresh pineapple, crushed; 1 cup sliced mangoes, 1 cup water, 1 tablespoonful honey

Mould in oval shaped dishes When ready to serve, turn out on crisp lettuce leaves Garnish with nasturtium leaves, and top with fresh shredded coconut or coconut whip

healthy condition and will continue to serve its owner for many years to come.

This habit of eating between meals, whether of sweets or anything else, is also responsible for fretfulness and irritability in the individual, for the nerves are not kept in the best possible condition.

Much has been appearing in recent medical and nutrition literature pointing out that some of our most serious diseases are the result of eating rich foods. Abstemiousness helps to bring about longevity.

What shall we as homemakers do? If we train a child from infancy, he will never develop a craving for sweets. He will never miss what he has not had. I remember the growing children of a friend who never would have dreamed of eating jam, because their mother had never served it to them. I also remember some young girls in boarding school who hardly knew what cake tasted like because it was almost never served in their home.

Serve your main meal as a rule, without any dessert Make the occasions when you do serve sweet desserts made of sugar and fats, few and far between.

Many homemakers feel they must serve desserts when there is company for a meal A little careful planning and study will help you to discover many natural and simple desserts And much to your surprise, you will find that many of your guests will appreciate it.

I remember how pleasantly surprised we were when visiting a friend in Germany to have thinly sliced oranges for dessert, and a grapefruit half with a cherry right in the middle on another occasion.

There are many such simple desserts—dried fruits of one kind or another with a few nuts. There are raisins, and also dates, alone, or served with any kind of nuts; bananas served with a sprinkle of

dessicated coconut and a little *cream. Then there are wheat sticks* made *from* atta, a *little gur,* and a little oil. Kneed well, roll very thin, lay in a baking pan, mark into stripes 3″ by 1″. Bake slowly. These are delicious alone, or served with raisins or with some other dried fruit, or with nuts of any kind.

Let us educate our families to like wholesome natural sweets. Let us learn to keep our children quiet in some other way than by giving them some sweet. Let us learn just which kinds of foods our bodies need for the best of growth and health. When we eat good, nourishing food, we not only shall be healthy, but we shall also have quick, strong, well-balanced minds.

If we educate our children along these lines, we shall be laying sound health foundations.

COFFEE AND TEA

(Continued from p. 10.)

all right. Failing to find any cause for his dizziness, the doctors gave him a seasickness medicine. He was still dizzy.

After returning home he called me for an appointment. I also checked his heart and blood pressure and found them normal in every way. He told me of going to the clinic. Finally I said to him, "How about coffee?"

"Oh," he replied, "you took that away from me two years ago, and I drink a caffeine-free coffee now." Then his face lighted up and he said, "I do remember that lately, on account of the pressure of work, I have been running across the street and getting a cup of real coffee about 10 a.m. and another at 4 p.m. Sort of gives me a lift, you know."

I said, "It's about to lift you off your feet. Don't drink it. Call me in twenty-four hours and report."

The next day he called and asked whether he could send a friend up to see me. "He is dizzy too."

I said, "What about yourself?"

"I'm all right now," he replied. "No trouble since leaving off the coffee."

Your heart is the most hard-working and faithful organ in your body. You don't whip a faithful horse; you feed him. A whip is no substitute for food except in emergencies. Feed yourself aright, and avoid the emergency.

There can be no question that in the great rise in heart and blood-vessel diseases the drinking of coffee is playing an important role. Any seeming lift you get is followed by an equal or greater let-down requiring still another lift

Although tea is a little less severe, you had better leave it alone too. It contains tannic acid as well as theine, or caffeine.

I practised in Canada as head of a hospital for nearly six years. I well remember a good friend and patient who had charge of a government experiment farm. Several times while lecturing to farm granges he almost fell from attacks of dizziness, and finally he came to the hospital. A no-tea diet for ten days cleared up all his symptoms.

You have only one heart. The pace of life is getting faster and faster. Your heart is already subject to great stress and strain from ordinary living. It will work as hard as it can as long as it can. Either tea or coffee will shorten its life and yours. You wouldn't whip a friend; you'd feed him. Treat your heart as a friend. If you have a good heart, don't tease it. Don't try to push it as far as you can. The results might be bad.

SURGEONS AND BONE BANKS

(Continued from p. 17.)

shot away. Albee replaced the missing portion by a graft no bigger than a pencil, which increased in shape and size until it had developed into an entirely new thigh bone that also contained a marrow cavity.

The main importance of bone grafting, and bone banking, is that hitherto incurable complaints are now curable. Diseases like paralytic scoliosis—a sequel to certain spinal column diseases which bend and twist the spine (the complaint of Pauline Dring, mentioned above) can now receive curative treatment, and terrible deformities almost corrected.

GENETIC EFFECTS OF RADIATION

(Continued from p. 7.)

creation may be expected to be ended.

In connection with the danger of radiation from medical sources, one member of the Group pointed out in a paper that radioscopic apparatus, sometimes not adequately shielded, is to be found more and more frequently in the consulting rooms of general practitioners

who do not have the necessary formal training in radiology.

In a paper by Professor R. M. Sievert, of the Institute of Radiophysics, Stockholm (Sweden), which accompanies the report, some reference is made to artificial radioactive products distributed in nature as a result of military tests. Professor Sievert recognizes that the WHO Study Group was concerned with the peaceful use of atomic energy and the effects, for instance, of the future disposal of radioactive wastes from such peaceful uses.

He points out, however, that it is essential to take into consideration the evidence obtained following atomic weapon tests, since such information is the best at present available for the study of problems in the field of artificial radioactive elements distributed in nature.

Recent measurements from large samples of foodstuffs in Sweden, Professor Sievert says, have shown that foods such as milk, beef, corn and vegetables eaten today contain artificial radioactive elements with a radiation level in many cases exceeding that due to the naturally-occurring radioactive constituents of animals and plants It does not yet seem possible, Professor Sievert goes on, to estimate the radiation doses to human tissues, nor their distribution in time, which are necessary data for drawing conclusions of biological significance

Professor Sievert believes that it is extremely difficult to predict what will in the future be the most important sources of radiation from artificial radioactive elements distributed in nature

"There is reason to believe that the problem of disposal of radioactive wastes will be satisfactorily solved and that precautions in the handling and use of radioactive material will be adequate," Professor Sievert says, but goes on to warn that "accidents and unforeseen events may gradually spread radioactive substances beyond control; they could then follow unknown paths and be harmful to mankind in ways that would become known to us only after long experience."

In a section entitled "Some Conclusions" the Group's report lists eight recommendations, including the establishment of more institutions and large university departments concerned with human genetics and improved teaching in this branch; the systematic registra-

HOW TO LOSE YOUR TEMPER

(Continued from p. 3.)

and self-reproach. It is unwise, destructive, and wanton. No man has a right to take out his meanness on his wife, his children, his employees, or his livestock. Worst of all, the petulant person indulges a temporary insanity that, like the howling wind, "blows out the candle of his own mind."

When should we be angry? Never, of course. But, more specifically, never when we are offended, when we are reproved, when others succeed, when we fail, when we are in trouble, when we see good in others that we do not see in ourselves.

If you lose your temper frequently, remember that there is just one cure for you. That is to lose your temper—lose it so completely that you will never find it again. Bury the hatchet so deeply in the past that memory will fail to register the last incident. Bury the handle too, so that there will be nothing to hold on to.

And don't forget, when good resolutions fail to gain the victory, ask God to help you. There are no "radishes" growing in the garden of prayer, but you'll find the fragrant flowers of patience and good will springing up in your heart as you come to Him for help and deliverance.

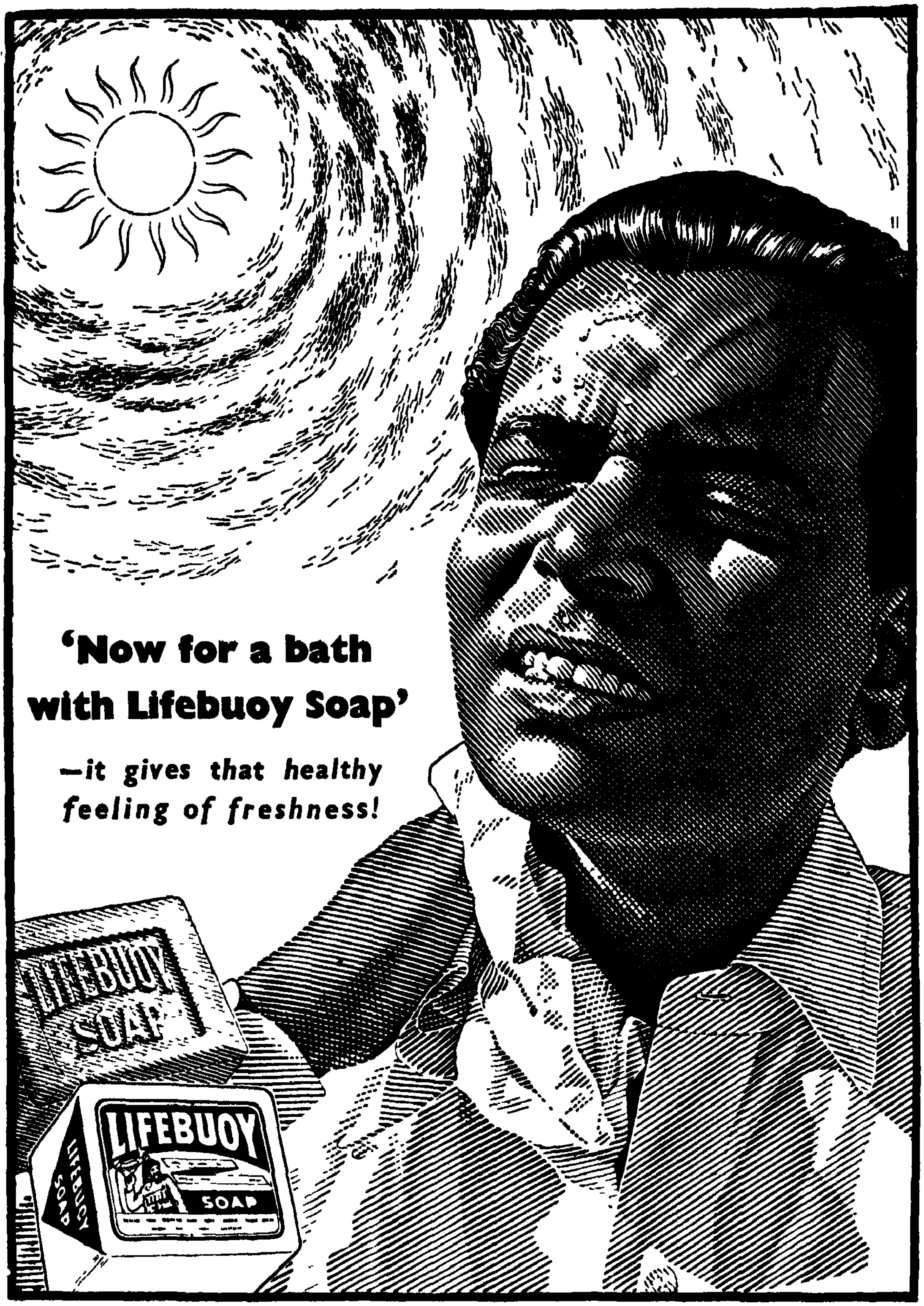
PEPTIC ULCER

(Continued from p. 12.)

Other good health measures should be invoked. The patient should have a regular bedtime and a rest during the day, preferably at the noon hour. A nap of ten minutes will do a world of good The ulcer patient will also benefit by daily exercise, whether walking, calisthenics, or other form of workout Exercise leads to better muscle relaxation in the body, and this in turn cuts down on nervous tension.

A spare-time hobby should be developed by the stomach-trouble patient. Preoccupation with a favourite pastime allows much-needed relaxation in these days of stress and strain.

The peptic ulcer is a digestive disease that can be prevented and can be cured. Standard medical and surgical treatments are available, and they usually bring good results. The family doctor can help the stomach work, with diet, medicine, and advice. But it is up to you to take his advice and avail yourself of his help.



tion of serious hereditary diseases; and efforts by UN Agencies towards the collection and publication of information on subjects like fertility, consanguineous marriages and parental ages which are so essential as background in human biological studies.

The Group was particularly impressed with the genetic hazards of man-made radiation from sources used in medicine, industry, commerce and experimental science. Both as an approach to control and as providing basic background information on radiation exposure and effects on man, it is essential, the experts agreed, that methods be found of recording exposures to individuals and populations, however difficult this may prove.

GARDENING FOR HEALTH

WHEN LAYING OUT A LAWN

D. G. Cooper

THERE seems to be a common belief amongst the amateur gardeners, that making a lawn merely consists of sprinkling some Doob seeds in the surface of the soil, and watering the plot every now and then. Unfortunately the result of such an operation is an abundance of weeds The secret of a well laid out lawn, is careful planning and a great deal of after care.

A lawn in front of the house, not only enhances the beauty of the garden, but also proves an asset during the summer months, when a green patch in the garden is perhaps the most welcoming sight.

The first and foremost point to consider when laying out a lawn, is the most suitable site, which should be free from the shade of overhanging branches. Although there is no fixed rule regarding the shape of the lawn, it should be borne in mind, that if the lawn is laid out on very irregular lines, it will provide difficulties at the time of mowing the grass. Neat flower beds may be constructed on the border of the lawn, providing a rich contrast in colours when the flowers are in bloom.

Having chosen and marked the plot for the lawn, the existing soil should be dug up to a depth of about two feet, and replaced with good loamy soil. However, if the area is extensive, then the old soil may be utilized. Should it prove necessary to follow the latter course, the existing soil should be exposed to the heat of the sun after it has been excavated. This will release certain elements from the soil, making it more fertile. A compost made up of equal quantities of well decomposed cow manure and fine earth, should be incorporated with the excavated soil, prior to filling up the pit. It is absolutely essential to break up the earth clods, and if possible, a garden sieve may be used with advantage, for removing stones and other rubbish.

Levelling the plot should now be taken in hand. For an extensive area, a mason will be required to do the job. A small plot can be levelled quite easily, by means of strings stretched across the plot parallel to each other, and held down by bricks. From the intervening spaces it will be possible to discern the unevenness of the ground, and levelling can be carried out accordingly.

Lawn grass may be propagated by seeds, cuttings, or roots. Approximately two pounds of Doob seeds will be required to sow a plot of 1,000 sq feet. The surface of the soil should be made perfectly smooth, raked fine as possible and evened with a light roller if one can be obtained Then stir the surface lightly with a rake, sow the seeds freely and rake it in lightly and go over the ground again with a roller, thus pressing the seed into the ground in a uniform manner.

GARDEN CALENDAR FOR JUNE

Plains

Vegetables: Sow all Indian Vegetables, Sags, Corn, etc Sweet Potato roots can also be cultivated.

Flowers: Sow Balsam, Calliopsis, Canna, Celosia, Cosmos, Dahlia, Gaillardia, Gomphrena, Imomoea, Marigold, Nicotiana, Portulaca, Salvia, Sunflower, Torenia, Zinnia, etc.

Divide Palms, Marantas, Ferns, etc

Cannas may be dug up and replanted after dividing the roots.

Transplant Chrysanthemums in larger pots.

Fruits: Propagation by gootie and layers can be commenced. Cuttings may also be put down.

Hills

Vegetables: Thin out seedlings and transplant the varieties sown last month Pumpkin and Vegetable Marrow seeds may be sown.

Flowers: Sow Amaranthus, Balsam, Hibiscus, Torenia, Zinnia, etc Prepare cuttings of Carnation.

Fruits: Propagate all varieties by layers and cuttings.

Frequent and profuse watering is necessary. The seeds usually germinate within a fortnight.

If Doob grass clippings are available, they can be spread over the required plot, and covered with a thin layer of fine soil. A light roller may be employed to smooth the surface of the soil. When the grass appears, a top dressing of cow manure may be applied with advantage.

Dibbling Doob grass roots is a tedious and lengthy process. However, this method may be employed when the area is small. The roots should be planted about three to four inches apart.

?

STAMMERING: Ques.—"My boy is 3½ years old and he was speaking quite all right for his age. About two months ago I marked a change in his speech. He began to stammer, and stammers so badly that he cannot express words beginning with M,N,O, etc He struggles and looks pathetic. When playing and talking with children of his age as well as below his age he is quite all right. The stammering commences when he begins speaking to people above his age.

I shall be grateful if a remedy is suggested so that the stammering may be cured in its infancy. He is quite healthy."

Ans—Stammering in children is due to nervous stress and it is usually outgrown. There is no operation or magic drug that will relieve this condition. It is important that the child receives sufficient rest periods during the day as well as at night, and that no attention whatever be given to his stammering. Ignore it completely and try to train the child to speak slowly. Do not let him get over-excited in play. He should have some good multi-vitamin preparation such as ABDEC Drops by Abbott and good nutrition. I would suggest that he have a stool examination to see if worms are present. Worms in the intestinal tract tend to increase nervousness in children.

?

LEPROSY TREATMENT: Ques. —"How long has one to take sulfa treatment for leprosy?"

Ans.—Sulfone drugs are the best we have at present for the treatment of leprosy. A person suffering from this disease may have to take one of these drugs for a number of years. Avlosulfone is a very inexpensive preparation. One tablet every other day or even less is sufficient in many cases to control leprosy. This, of course, the same as with other patent drugs, should be taken only under the supervision of a well-qualified physician.

?

SEBORRHEIC DERMATITIS: Ques.—"I have something that looks like dandruff all over my body. I am losing hair rapidly from my head, brow, eye-lashes, etc. What treatment should I take?"

THE DOCTOR SAYS

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7 Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published Address "The Doctor Says," Oriental Watchman and Herald of Health, P O Box 35, Poona 1

Ans—I suspect you are suffering from Seborrheic Dermatitis. In areas of severe inflammation we would recommend compresses saturated with Potassium Permanganate solution 1-10,000. Apply these compresses 20 minutes four times a day This solution must be prepared fresh each day if it is to be effective. As the inflammation subsides, Pragmatar should be applied at night. In addition to this treatment, you should have regular periods of rest and sleep Frequent bathing using mild soaps and no soap at all if it is irritating, and partaking of high protein, low carbohydrate, low fat diet is desirable. It would also be well to take B complex Vitamin with 2 c c of Crude Live Extract by Intra-muscular injection twice a week.

?

GASTRITIS: Ques.—I am 21 years old and experience frequent sensations of burning in the stomach and also in the eyes. I am very weak. Please let me know what treatment to follow?"

Ans—It is possible that the frequent sensations of burning in the stomach may be Gastritis. I would suggest that you eliminate hot curries and that you eat well on a simple diet. Also discontinue the use of tea, coffee and tobacco, if you are using these. Burning in the eyes can be an allergy. An anti-histamine preparation given under the supervision of a well-qualified physician may control this complaint

?

PROMINENT BLOOD VESSELS. Ques.—"I am a married woman of twenty-nine. For the last six years I have been noticing capillaries, dark red in colour, on my thighs. This condition is increasing and is now beginning to appear on my legs as well. I find that my legs pain after standing for a short while The slightest bump I get becomes blue and stays for days. I also suffer from indigestion and constipation My blood pressure is normal Kindly advise me as to what treatment I should have to get rid of these prominent blood vessels on my legs or at least to prevent them from spreading further"

Ans—You have apparently an increased fragility of the blood capillary walls. This may be due to an insufficient vitamin C intake I would suggest that you take 50 mg of vitamin C three times a day for a while, and with that one Rutin tablet three times a day for two weeks. The elastic bandage placed round the limbs, if accessible, are of some benefit I would advise you also to lose some weight.

?

POLYCYTHERMIA: Ques—"Some eleven years ago I lost my husband of Polycythermia. He was fortunate to have the best medical treatment, but passed away after 5 years. Doctors said there was no known cure and that the disease was very rare in India Please let me know if there is a cure for this disease nowadays, or can the disease be successfully controlled Is it hereditary?

Ans.—Polycythermia vera is a rare disease of middle and late life and affects twice as many males as females, occuring more frequently among Jewish people than others. The disease has some sort of relationship with Leukemia and sometimes develops into this disease There are many ways of giving treatment, which may produce relief in time, but to date, there is no sure known cure.

?

THE LAST WORD

Chicks and Monkeys

TEN-DAY-OLD chicks are better than monkeys for testing the potency of polio vaccine, researchers have found. Though federal rules now require each vaccine batch to be tested for three weeks on twelve monkeys, the chicks (cheaper and far easier to handle) do a better job in about five days.—*Time.*

* * *

Narcotics Addiction and Physicians

NARCOTICS addiction is 100 times more common among physicians than the general population, reported Detroit's Dr. J. DeWitt Fox, after analyzing federal statistics. One doctor in every 100 is a present or possible future victim. Main reasons: emotional problems, pressure of work or pain, plus easy access to the drugs. —*Time.*

* * *

Drugs and Arrow Poison

DRUGS made from curare (South American arrow poison) make surgery safer by relaxing patients' muscles. Similarly, reports the National Heart Institute, a drug named strophanthidin, from an African arrow poison, has been found to reduce the danger of heart stoppage during operations under hypothermia.—*Time.*

* * *

British Grant for Vellore Medical Research Unit

AMONG a number of substantial benefactions announced by the Wellcome Foundation, of London, is a grant of £10,000 to the Christian Medical College at Vellore, South India, for the setting up of a metabolic research unit and maintaining it for five years.

The research unit is to be used, in the first instance, for the study of fat metabolism in relation to tropical sprue, a condition associated with dysenteric diseases.

The Wellcome Foundation is financed by the well-known pharmaceutical firm of Burroughs Wellcome Ltd.

* * *

Atoms and X-rays

A PHILADELPHIA cancer specialist reported recently that he is "convinced" that rays from radioactive cobalt, a peaceful product of atomic energy, are more beneficial than conventional X-rays in treating cancer.

Dr. Stanley P. Reimann and his associates, of the Institute for Cancer Research and Lankenau Hospital Research Institute, were among the first physicians in the United States to obtain a so-called cobalt bomb, a teaspoonful of metal made radioactive by bombarding it with neutrons in an atomic reactor. In the treatment of cancer, it is used as a radiation source 12 times more powerful than the conventional 250,000 electron volt X-ray machines.

Its energy equivalent, Dr. Reimann said, would be that obtainable from a $30,000,000 block of radium. But there just hasn't been that much radium processed since radium's discovery in 1898, Dr. Reimann pointed out.

Patients under treatment at the Philadelphia Institute are given treatments lasting 8 to 10 minutes each as the ray-emitting capsule of radioactive cobalt is rotated around the body, its radiations focused through the tumour.

One circumstance, the fact that the cobalt therapy is now being used chiefly on patients with far-advanced cancers, makes it difficult to make comparisons with benefits from ordinary X-rays, Dr. Reimann pointed out. He further noted that cancer benefits are appraised most reliably only after a 5-year interval, and the cobalt has been used for only about 2½ years.



* * *

Rabies and Bats

IN THE United States at least 150 insect-eating bats have been found infected with rabies in 15 different areas. There have also been two cases of human rabies in the United States which may have been caused by the bite of insectivorous bats. Moreover it has long been established that the disease is actually transmitted to man and animals by blood-sucking (vampire) bats in certain Latin American countries. Recently, reports reached the World Health Organization from Yugoslavia that insect-eating bats might be transmitting rabies in that country also, and the danger that the common bat may constitute a source of rabies infection for human beings in Yugoslavia and other countries of Europe has aroused concern among health authorities. In response to a request from the Yugoslav Government, WHO sent Dr. Ernest Tierkel Chief of Rabies Control Activities U. S. Public Health Service, to the Pasteur Institute at Novi Sad, near Belgrade, to make a special study of the situation in Yugoslavia. Further studies are being organized at the Institute concerning the possible role of insect-eating bats in the transmission of rabies, and it is hoped that the Institute may serve as centre for similar studies of the problem in other European countries.

The WHO Expert Committee on rabies has recognized the importance of wild-life rabies in many countries of the world and has issued a warning that such reservoirs of the disease were of an extent and nature that demanded special efforts to control them.

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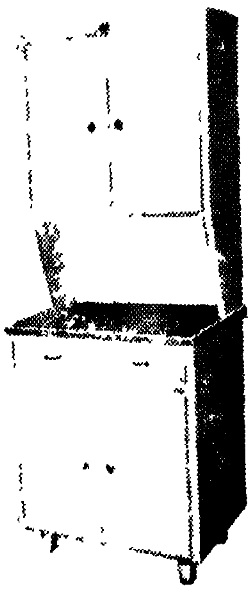
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SA 57 2

ATOMIC X-RAY SPEEDS CARE OF WOUNDED



A NEW atomic device, designed for use in emergencies, is a portable X-ray unit that produces a finished picture within ten minutes without electricity, water or a darkroom. The 48-pound unit, which can be carried and operated by one man, is being tested by the United States Army and may be available for civilian use at a later date.

An on-the-spot X-ray picture has several advantages. It determines the exact nature of a wound or injury without moving the victim. Because the X-ray picture can be sent to the hospital before or with the patient, the attending doctor can decide the best course of action without delay. In cases of critical injuries quick X-ray pictures can be the means of saving lives.

The atomic substance that powers this remarkable new device is a capsule of radioactive thulium about the size of a kernel of corn, surrounded by lead plate to protect the user from exposure to radiation. Under normal use, this capsule remains potent for a year, after which it can be rejuvenated in an atomic reactor.

The capsule and its lead shield are packed ready to carry on a man's back. Included with the unit is a self-contained cassette or holder in which the pictures are made with radio-sensitive paper and pads instead of film. The paper and pads are saturated with developer and stabilizer separated by leak-proof dividers. The cassette is wrapped in a light- and water-proof covering. When the cassette is exposed, the dividers are removed and the radiation-sensitive paper makes the X-ray picture, called a radiograph. The exposure is timed with a wrist watch.

Although a radiograph lacks the fine detail of a standard X-ray film, this atomic X-ray unit and others also being tested compensate for this disadvantage by their ability to make on-the-spot records of injuries and by the fact that operation of the unit can be learned by an adult within a few hours.



The atomic X-ray unit, which weighs only 18 pounds, can be carried on a man's back. It takes a picture of a wound or injury without moving the victim, a great advantage in treatment and handling of the patient on the spot and later in a hospital.

* * *

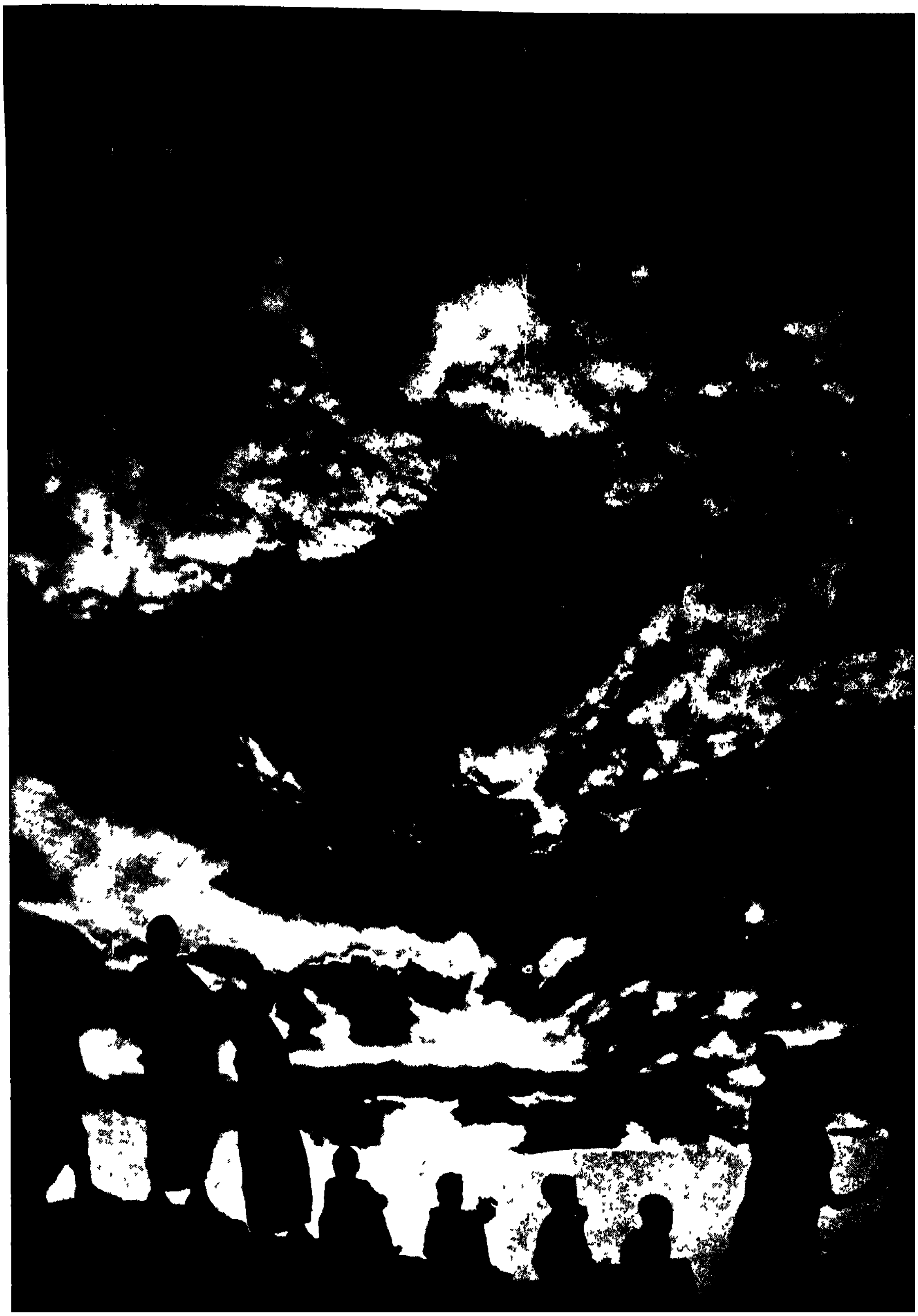
The atomic substance that powers the new portable X-ray unit is a capsule of radioactive thulium one-sixteenth of an inch in diameter, shown here in contrast to a coin three-fourths of an inch in diameter. The capsule, enclosed in protective lead, operates the unit for one year after which it can be rejuvenated in an atomic reactor.

Photos U S I S

The Oriental Watchman and

Herald of Health

A Magazine ...



ULY, 1957

These Children of Egypt Are Making History

—A WHO Feature—

TODAY, modern medicine has found the means to cure trachoma (an eye disease which can lead to blindness) by the use of antibiotics and sulpha drugs. But for treatment to be effective in countries with high incidence, mass campaigns have to be organized. This is why hundreds of children in Egyptian schools now proudly wear round metal badges on their shirts and tunics. These show that they have been selected to serve on their school "health committee," whose duty is to inspect fellow-pupils and schoolrooms for cleanliness and, most important, to apply antibiotic ointment to the eyes of their classmates.

The children's enthusiastic support does a great deal to ensure the success of a project, operated by the Egyptian Government, WHO and UNICEF, aiming at complete control of trachoma in a pilot project area in Qualiub.

The programme includes intensive sanitation campaigns in several villages of the area, fly control, particularly of *Musca sorbens* which is believed to play an important part in the transmission of eye diseases and health education among parents, community leaders, teachers and the children themselves.

A group of 5,000 children of pre-school age is given sulpha drugs over a period of several days before the seasonal outbreak of acute eye infections is expected. Antibiotic ointment is used to treat about 2,500 school children twice daily for 60 days. In each of a number

Continued on p. 36.



Photo: WHO

Two members of the pupils' "Health Committee" in an Egyptian school. They are preparing the antiseptics and absorbent cotton for the anti-tracoma treatment.

The Oriental Watchman and

Herald of Health

A Magazine for Home and Happiness

48th YEAR OF PUBLICATION

Postal Address: Post Office Box 35, Poona 1, India

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July, 1957

L. J. LARSON, Editor

DUNBAR SMITH, M.D., D.N.B., D.T.M. & H. (LOND.), Associate Editor

J. B. OLIVER, M.D., D.T.M., Associate Editor

OUR COVER

The thirsty earth soaks up the rain,
And drinks, and gapes for drink again,
The plants suck in the earth, and are
With constant drinking fresh and fair

—Anacreon

Photo Vidyavrata

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Minute Meditations

ATTITUDES AND ALTITUDES

D. A. Delafield

HOW high you go in life depends on how high you plan to fly. Two thousand, five thousand, or perhaps eight thousand feet. Attitudes determine altitudes. If you want to fly to the top, you must lay your plans and begin gathering equipment. Plan for emergencies—wind currents, storms, and downdrifts. Remember to take plenty of fuel along. Sometimes long flights are required for gaining altitude, to develop patience.

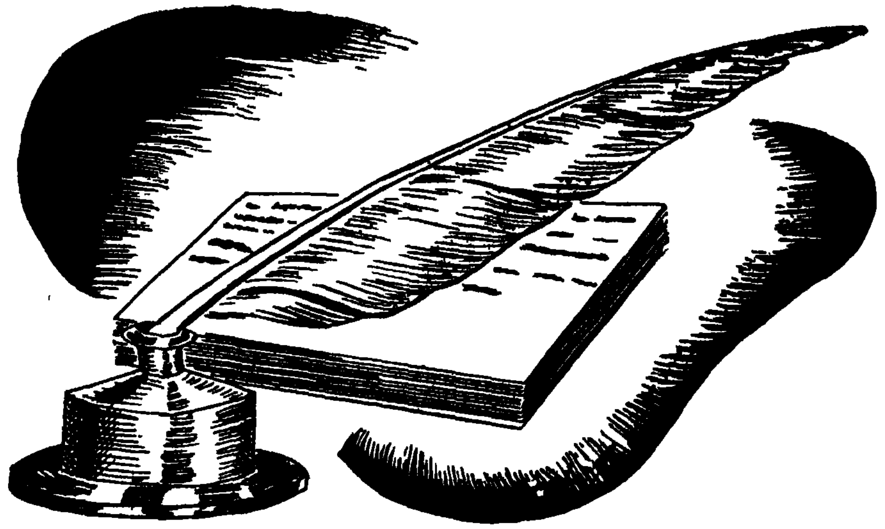
Examine yourself to make sure you can live in the heights. The atmosphere is rare, and you should determine whether you can take it. You will be up there alone where it is cold, but you will be breaking records, so perhaps it is worth it to you.

There are some attitudes you will want to avoid if you actually mean to succeed in life. Self-pity is one. Never feel sorry for yourself, no matter how much pity you deserve. You might try to make a public speech and fail. People might laugh at you, but don't cry. Laugh with them. Confess that you are an amateur. With laughter rolling all about you, tell folks with a smile that there is another time coming, and you mean to succeed.

If you are overweight and people make fun of your avoirdupois, make fun of it yourself. Don't be offended. Maybe you have been endowed by Mother Nature with generous proportions, and you have to live with your fat, but do it with grace, no matter how ungraceful you feel.

There are uncounted numbers of ambitious people in the world who have their peculiarities—big

(Continued on p. 32.)



THE EDITOR SAYS

THIS FATAL "FLU"

AT THE date of writing (mid-May) it is too early to know whether the "flu" epidemic now raging in Malaya will reach India or not. It is our fervent hope that it will not spread throughout the sub-continent and that India, Burma, Pakistan and Ceylon may be spared the loss, suffering and death that such an epidemic might bring.

There are those who take the attitude that such epidemics and plagues must come to the human race periodically in order to maintain population levels. Others, in a self-righteous sort of way, contend that "it is the will of the gods," that it is "fate," that it is "kismet" or some other such unscientific and illogical concept. Others may simply shrug their shoulders and say, "Well, if I'm supposed to get it, I'll get it. If I'm supposed to die, I'll die. So,—why bother about it?"

People who take that sort of attitude toward epidemic diseases, whether the disease is the "flu," or cholera, or the plague, or smallpox, or some other virulent contagion, are usually the ones who first succumb and who keep the grave-diggers and the burning-ghat attendants busy!

It makes no difference what the contagion may be, there are precautions that can be taken by the average person, which precautions, if taken, will result in the saving of many lives. It is a murderous attitude to take in refusing to permit one's children to be vaccinated against smallpox. It is nothing less than criminal negligence to fail to have one's self and one's family inoculated as a protection against any of the dangerous diseases for which preventative inoculations are available.

Of course, we recognize that there is no vaccination or inoculation which will serve as a protection against the "flu." It is possible that some of the antihistamines may be useful and that some of the antibiotics may also be helpful in treating the disease, but at present there is no injection that will prevent the disease. There are, however, some things that anyone can do which will protect from the disease or lessen its harmful effects upon his system.

If one forms the habit of drinking plenty of pure water each day he will thereby help his body maintain good health. Without sufficient water the body cannot eliminate the wastes from its system and the impurities from the blood stream as it should. These accumulated wastes and impurities contain poisons and weaken the body and lower its resistance to diseases of all types.

Most people are careful to empty their bladder frequently. But many neglect their bowels in a most shameful manner. Why is it that they will content themselves with one bowel movement in 24 hours when they insist upon stuffing themselves with at least three huge meals during the same period of time? Often they take in a couple of other lighter meals as well! Is it not logical to reason that if the alimentary canal is filled three times a day it should be emptied just as often? If the waste is permitted to accumulate and is retained in the bowel the result is a sort of semi-perpetual constipation. But worse, and far more dangerous to the body is the absorption through the walls of the intestines of harmful substances which are definitely poisonous to the body. The system intends that those poisons should be eliminated from the body. But if the waste substances are allowed to collect in the bowel, and are retained there for any length of time, putrefaction occurs and the body is weakened and made less able to resist the inroads of disease.

It is well known that the body is made up of those substances which are taken into it as food and drink. It is commonly understood that certain substances cause death when taken into the system. We call these substances poisons and are very careful not to take them into our body. But many people fail to realize that many of the items commonly included in the daily diet either as food or drink are poisonous and therefore harmful to the body. While their effects

may not be so sudden or dramatic, they nevertheless are damaging to the system and therefore should be eliminated from the diet. Otherwise, they result in harm and make the body more susceptible to the effects of disease. Alcohol, tea, coffee, drugs, meat, and fish are all harmful to the human system because of the poisons which they contain. People would have better health if, instead of these things they would eat plenty of fresh fruits, vegetables, grains, and nuts. Wholesome milk and good fresh eggs are also nutritious. Such foods have a helpful effect upon the system.

As an added protection against the "flu" and respiratory diseases in general, it is well to increase the intake of fresh fruits and fruit juices, especially citrus juices such as lime, lemon, orange and grapefruit. Tomato juice is the poor man's orange juice and is very rich in vitamin C, as is also fresh raw cabbage and the common *amla* or *nellikai*. These may be used in place of the citrus juices.

Most people catch colds and the "flu" due to some act of carelessness. They may not get sufficient rest, with the result that the body defences are weakened. They may expose themselves to a chill either by sitting in a draught or by carelessly wearing damp clothing.

At all times sufficient rest is essential to good health, but during a "flu" epidemic it is imperative that the body have sufficient rest so that it may maintain its defence forces at full strength. Most people need at least eight hours' sleep each night. Children need even more than eight hours' sleep because of the great drain that growth makes upon their physical resources.

People should be sure that there is plenty of fresh air in their sleeping rooms. Poisonous wastes are eliminated from the body through the air that is breathed out. If one sleeps in a room which is tightly closed he breathes the same stale air over and over again, thus taking back into his system the poisons which had previously been excreted from it as wastes. Thus he poisons himself through the air he breathes. Fresh air contains oxygen for the blood to pick up in the lungs. Fresh air carries away the waste poisons from the lungs and imparts health and vigour to the body.

We recognize that in many parts of southern Asia it is not necessary to mention the value of frequent bathing in order to maintain good health and the body defences against disease But all may not be aware of the fact that frequent cleansing baths are essential to the maintenance and preservation of good health The pores in the skin assist the kidneys and lungs in excreting poisons from the system. These poisons collect on the surface of the skin and on the clothing worn next to the skin. Thus it should be evident that frequent cleansing baths and frequent changing of the clothing worn next to the body are essentials for good health.

Too, it is the part of wisdom not to try to fight what may seem but a common "cold." That "cold" may be the beginning of the "flu." When the symptoms of a common cold first appear, it is well to get to bed and stay there. Drink plenty of liquid, such as hot lemonade. Take a good hot bath and cover up well so as to encourage a profuse sweat. Be sure to keep covered so as not to chill. Eat lightly and mainly of fresh fruits.

The reader who will follow these suggestions will find that if the "flu" should develop it will be milder and his doctor will be able to do more for him because he has been living in such a way that the natural defences of the body have been maintained at full strength.

—L. J. L.

SPEEDY VIRUSES

A VIRUS can burrow its way into a cell in as little as one tenth of a second, Yale University scientists report. In studies by Dr. Ernest Pollard, Aadne Ore, and Jane Setlow, reported to the American Physical Society meeting in Washington, D C, it was found that a virus clings to a cell, slips into it, and leaves its outer coat outside while the inner part enters and multiplies

The virus they studied was a bacteriophage, which preys on bacteria The virus uncoils after it enters the bacterium, the scientists found from experiments with virus and bacteria that they bombarded with deuterors jusa after the virus had entered the bacterium

In another report, Dr. Frank L. Horsfall, Jr., of the Rockefeller Institute of Medical Research, in New York city, stated that one must attack viruses chemically before the viruses reproduce themselves The cellular process leading to reproduction of viruses starts in a latent period, considerably before new virus particles emerge. If the chemical is to stop this reproduction it must attack at this stage. Once a virus has entered a cell, the reproduction cannot be stopped.

New particles of mumps virus do not appear before twenty-four hours when grown in the laboratory. However, influenza A and B viruses and Newcastle virus, a poultry disease that human beings may also contract, seem to be much faster, producing particles in less than three hours.

THE STUDENTS' GUIDE

ON STUDYING ABROAD—PART I

MUCH has been appearing on the press during the past few months concerning study abroad. Some editors seem to favour the idea strongly while others would seem to discourage anyone from thinking of studying in a foreign land. Apparently the subject is one which is deserving of consideration.

As we travel about the country we are frequently approached by young people who wish to study abroad, or by their parents. Whenever we visit colleges or universities we find that many of the students are seriously thinking of continuing their studies in some other country. Frequently we are asked our opinion. Fathers ask, "Should I send my son to America for advanced studies?" The son doesn't ask whether he should go or not, he simply inquires, "Which institution should I attend when I go?"

It is not our purpose to discuss the merits of the different educational institutions in foreign lands. Such information can be easily obtained from the embassies, consulates, and information centres maintained by the various foreign countries. We shall simply discuss study in a foreign country.

Let us state very bluntly that foreign study is not to be recommended for everyone. With some it may do more harm than good. It is neither necessary nor advisable that the majority or even a large minority of the youth should study abroad.

We would not favour sending any young person abroad for further study if his motive is but a selfish desire to obtain personal advantage over his fellow students. Nor would we approve of foreign study for the person who merely desires to improve his prospects for personal advancement and profit. We would not encourage people to go abroad for study if their main purpose is to travel, or to be able to say in later years with superior airs, "When I was in— "

Obviously we would not recommend foreign study when such study is not necessary for one's life work. We would not advise study abroad when comparable training is available in one's own country. Nor would we approve of study in the U. K. or America, or some other country in order to maintain a family tradition—"Father studied in England, so I'm going to study in England, too."

Of course, it would be foolish for anyone to plan to study abroad if his main objective is to get out from under parental control and to escape discipline.

However, we would not wish to be misunderstood. There are times when a young person should go abroad for further training. In such cases the young people concerned should do everything they can to obtain such an education.

We would stress, too, that in some professions where foreign study was essential thirty or even twenty years ago, it is now no longer necessary to go abroad to obtain a very thorough education in those fields. We would like to point out also, that ten or twenty years from now there will probably be very few fields of study for which one would need to go abroad so as to obtain the needed preparation and formal instruction in order to qualify for effective work in his chosen profession.



Under the present circumstances in southern Asia it is advisable for a person to arrange for study abroad in order to obtain certain types of specialized training which are not yet available in his own country.

There are times when a student has obtained all the education he can in his chosen field of study so far as the opportunities in his own country are concerned. Then he would be justified in seeking to obtain more experienced and advanced instruction in some foreign country, if he is certain that the training so to be obtained is in any way in advance of, or superior to, that which he has obtained or can obtain at home.

It is also recognized that at times firms, departments, services, or organizations may select from among their promising employees certain ones whom they recommend and sponsor for study abroad. In such cases the candidate so selected should look upon himself as very fortunate and avail himself of every opportunity offered. Such openings do not come as the outgrowth of selfish motives in the individual but as the result of consistent satisfactory work. Such offers are not made primarily for the advantage of the individual selected, but for the improvement of the firm, department, service, or organization which selects and sponsors the candidate. Thus any person so selected should recognize that upon his return from such study he is obligated to the sending organization and should not accept such sponsorship unless he is willing to

ept the responsibilities and the gations that go with such ac- tance.

t is sometimes helpful and ad- ble for a person who has already ieved a large measure of success his field of specialization to go oad for a period of time to ive and study the techniques methods used by people in lar lines of work or specializa- in other lands. In this way he learn much and may also con- ute much to those with whom comes into contact.

n cases such as those listed ve, we would advise going oad for study. But we would not se those who are immature in r judgment, those who are un- ded as to their field of speciali- n, or those who are weak in ...al development to plan for study overseas.

We recognize that unless an individual is happily married and has a satisfying home life he is not going to achieve his highest possible attainments in life. We recognize, too, that for anyone to really make his greatest possible contribution to the greatest good of the largest number of people he must be dedicated to the service of humanity. In countries such as those of southern Asia, such opportunities for service are unlimited and when conscientiously entered upon and consistently pursued are most satisfying. Therefore we feel that before going abroad for study young people should be happily settled in life. Either they should be happily married, or at least have all arrangements completed for a congenial union. Under such circumstances there is less likelihood of their making an unwise choice or decision while abroad, which might result in great sorrow in later life and prevent them from returning to their homeland, or which might interfere with the accomplishment of their life work if they should return.

(Concluded next month.)

THE BEST HOBBY OF ALL

Mildred Presley Hoekstra

STARTING with a smile, you can develop the most fascinating hobby of all—the hobby of friendliness. There are as many ways of developing a friendship hobby as there are people who are interested in developing it.

I started my friendship hobby one morning while riding downtown in a bus. The woman sitting next to me looked tired, sick, or unhappy. I couldn't be sure which, but I wanted to share with her my happiness. I had just seen a beautiful sunrise, and some rosy clouds lined with silver still coloured the eastern sky. I leaned over and said, "Isn't the sky beautiful this morning?"

"I hadn't noticed it," she replied wearily, but she did glance upward. Later, a full five minutes later, she thanked me for calling her attention to the beauty, and we talked of happy things all the way downtown. She left me with a cheery smile, and my heart sang for the happiness it had brought me.

Dividends on my investment in this friendship grew and grew. Whenever I met this lovely lady she shared with me some interest or beauty she had discovered. We were both richer for our friendship.

A hobby of collecting articles of interest can be very fascinating (I am a rock collector of sorts myself), but it is one-sided as compared with a friendship hobby. Every person you meet has something fine to offer you in friendship's exchange—something rich you can obtain from no one else.

Friendship, like sunshine, belongs to the whole world. It grows by sharing. How often self-interest prevents us from seeing the heart hunger and loneliness of others. We feel sorry for ourselves when we are lonely, and hope that those around us will understand and do something about it, yet we often fail to do the same for others.

The world can be a lovely place, but it can be a pretty lonely one too. Cities are filled with people who live alone and who long for a bit of friendship. It may be that the only appreciation they receive is the friendliness we pass along to them. The number of suicides each year show how hopeless some people find life to be. We all need the cheery greeting, the deserved compliment, and the sharing of pleasant thoughts. No one gets too much appreciation in this world.

A hobby is an interest you devote your spare time to—and what can be more interesting than people? The object of a hobby is to make you happier, healthier, and better adjusted. A friendship hobby will certainly do this. It is the happiness this hobby will bring you that will make you eager to continue riding it. It costs little more than a bit of spare time, and the rewards are so great that they can never be estimated.

All hobbies are more enjoyable when shared, and every friend made is another to share life's experiences with you. Every additional friend means more happiness for two.

Friendship was Jesus' chief hobby as well as His lifework. He was a friend to those who appeared unattractive as well as to those who were charming in their manner. He was especially kind whenever He met someone who needed His love

(Continued on p. 29.)

DADDY

A SMALL EDITION OF GOD

PAUL C. HEUBACH

Your child will build his conception of God from his daily impressions of his parents.

TWO boys were discussing the devil one day, and one said, "Do you believe there is a real devil?"

"No," replied the other, "he's just like Santa Claus—he's your daddy."

The little fellow's statement "He's just like Santa Claus—he's your daddy" portrays many adults' concept of God as well. If you analyze the prayers of many men and women, you will find that they are not much more than letters to Santa Claus. When Santa doesn't show up with the desired gift the response is "Oh, well, I guess there is no Santa Claus anyway." When God doesn't seem to grant our petitions we are likely to say, "I guess there is no God."

When we think of the "daddy" part of the story we are introduced to a most important consideration. To most children, Daddy is a small edition of God. Concepts of God from childhood to adulthood are gained more from what parents are than from what they teach.

A little girl came home from school early one afternoon and decided to surprise Mother and clean the house all by herself. She worked hard for several hours, and was dusting the last chair when Mother came home.

Now, her mother was a perfectionist, also was not feeling well that day, and having had a difficult time at the office, she was irritable. When she came into the room, instead of greeting the little girl with words of appreciation and love, she looked around, and noticing that some dust was left in one corner and on one or two of the rungs under a chair she blurted out, "How many times must I tell you to get the corners and dust under the chairs? Will you never learn?" With that she went into the bathroom, leaving a crushed little daughter.

On another occasion the little girl decided to cook supper and have everything ready when Mother came home. Among other things she decided to make biscuits. She followed the recipe on the box, and made fairly good biscuits for the first time. In the process, however, she spilled things and, of course, didn't think to put everything away.

When Mother came home, her first words were "My, what a mess you have made!" She didn't even notice the biscuits.

This child came to think, "Nothing I ever do is just right! What's the use!"

Is it any wonder that years later this same little girl sat in her minister's office and said, "You know, Pastor, I don't see any use in trying to be a Christian. I can never measure up to God's ideals. I try hard, but I always fail."

These words were but an echo of her thinking years before. Nothing she ever did was quite right for her mother. So she felt that nothing could be quite right for God. Such concepts have a definite bearing on mental health. To have a healthy mind one must have a healthy attitude toward God, and this attitude to a larger degree than many realize is determined by parents.

Some years ago a study was made of the factors involved in loss of faith in God. By several case studies from a mental hospital the author showed how loss of religious faith reflects a personal sense of rejection by parents and others. Loss of faith in oneself and others is projected to a loss of faith in God. He concluded that the pastor need not use argument to restore faith. Loss of religious faith is an emotional loss that needs to be restored by understanding and ac-



If parents' lives are to help explain God to their children, there are some significant questions fathers ought to ask themselves.

ceptance in a supportive relationship

A student makes the observation that religious and ethical values become effective through personal identification, not when imposed by creed. A person's religious faith has its roots in the relationships he forms early in life, the most important of which is the parent-child relationship.

In discussing the commandment "Honour thy father and thy mother" one author wrote: "Parents are entitled to a degree of love and respect which is due to no other person. God Himself, who has placed upon them a responsibility for the souls committed to their charge, has ordained that during the earlier years of life, parents shall stand in the place of God to their children."

If parents' lives are to help explain God to their children, there are some significant questions fathers ought to ask themselves.

If my children when they are older serve God as they now obey me, will I be satisfied? If my children's future attitude toward God is their present attitude toward me, how about it?

You see a group of boys playing A father comes along, and you hear one little fellow say, "Here comes Dad; let's get going" Another father approaches a group, and you hear in an altogether different tone of voice, "That's my dad Hi, Dad!" What a world of difference in the attitudes of the two!

On one occasion two teen-age boys were discussing plans for the week-end One asked the other to go hiking with him. The boy replied, "No, I'm going with Dad to the mountains for a couple of days."

"Who is going with you?"

"Oh, no one, just Dad and I"

"I'd hate to have to spend two days with my dad alone," said the first.

"Oh, but you just don't know my dad."

The chances are that when these two boys grow up they will have similar attitudes toward God.

If our children's attitude is temporarily "anti" in their desire for independence, do we have the patience to realize that it is part of the process of growing up, and still show a loving attitude? Are we able to love them unfailingly for what they are now rather than for what they are to become? Do we try to inspire them to better things? That is God's way of dealing with us. Do we deal with our youngsters' errors as God deals with ours? forgiveness unto seventy times seven?

Here are ten rules for fathers on building their children's future as taken from the *Temple Baptist Messenger*.

"1. He makes himself responsible for his child's behaviour

2 He shares in his child's activities.

3. He makes his child feel secure.

4. He has his child's complete confidence.

5. He is never blinded to his child's faults by his love. He knows he serves his child's interest best by recognizing and correcting weakness.

6 He is always available to help solve youthful problems.

7 He does not demand filial devotion, he wins it

8 He recognizes and accepts as largely his the responsibility for his child's mental and spiritual development.

9 He contributes to making the home his child's heaven.

10 He strives to be the man his child thinks he is"

A true knowledge of God in parents and the transmission of concept to children by means of a wholesome relationship—of fellowship and understanding—is one of the most important contributions to

(Continued on p. 28.)

The Best "Tonics" Are Free!

CHARLES NEWTON

IF ALL of us bathed every day, drank at least six glasses of water daily and breathed correctly, half the doctors of the world would have to change their profession! The best tonics for good health—water, fresh air and sunshine—have always been provided free by a bounteous Nature. And yet what a large slice of the average man's earnings is eaten away by doctors' bills and patent medicines.

The so-called savages seem to have learnt the secret of Nature's prescription more advantageously than we who boast of a civilization that compels us to spend a goodly portion of our life in attempting to remain fit. With all our vaunted scientific progress, diseases are becoming more and more complex and, sometimes, un-diagnosable Every year, the pharmacopœia becomes increasingly cumbrous, without correspondingly lessening the human burden of woe.

It seems strange that while people are willing to go to unlimited lengths in clogging their system with all kinds of drugs, patent medicines and proprietary tonics, they do not realize that often by practising a little cleanliness they can rid themselves of their ills.

There is nothing complex about keeping good health You must drink as much water, or other liquids (alcoholic ones excepted, of course!) as you can By doing so, you wash yourself internally Bathe every day. This clears the pores of the skin and keeps you clean externally. Enjoy the fresh air. Breathe correctly Absorb plenty of sunshine.

Young men are prepared to torture themselves by lifting heavy iron weights and using sinister looking devices, in their desire to build "the body beautiful," without paying sufficient heed to the elementary rules mentioned above. The human body is not meant to lift heavy weights—that is the function of a crane!

Another simple, but nonetheless important, requisite is sleep As you know, during sleep you repair your worn-out cells and your lost energy is replenished Late nights are the curse of this age

But the agent by far the most ruinous to our structure is worry "Take no thought of the morrow" is a wise adage, if it is applied correctly None of us knows whether tomorrow will ever come Far better is it to take care of today, which is right here. Moreover, worry has never solved a single problem On the contrary, it has converted many a problem into an insoluble mess. Good cheer and a lively sense of humour not only make us more bearable to our fellow human beings but keep us in good repair. Your physiology book at school has already warned you of the ill effects of worry and bad humour at mealtime. "Laugh and grow fat" is a simple and rational piece of advice.

Another careless habit that costs us much in dental bills and general ill-health is failure to rinse our mouth after meals. It costs so little in time and labour and nothing financially and yet by our laziness we are made to pay dearly. We take considerable pains to keep ourselves clean externally, and this is not as important as internal cleanliness.

In addition to these primary rules, if we took a little care of our diet, we should be wiser and happier people More harm is done by over-eating than by underfeeding. It is pertinent to point out that the importance of meat in the diet has been over-emphasized. Its disadvantages are many It is difficult to digest Its wholesomeness is in grave doubt in the circumstances prevailing in most places Its quality in many countries, where animals are neglected and unscientifically fed, is miserably poor. It is inclined to over-heat the system and is unsuited to tropical climates in particular It is known to prevent longevity From the purely æsthetic stand-point, there is, of course, something repulsive about slicing up cows, sheep and goats and eating them, a point driven home very well by the late Mr Bernard Shaw In any case, before you have your next meat dish, you would do well to take a trip to your local slaughterhouse!

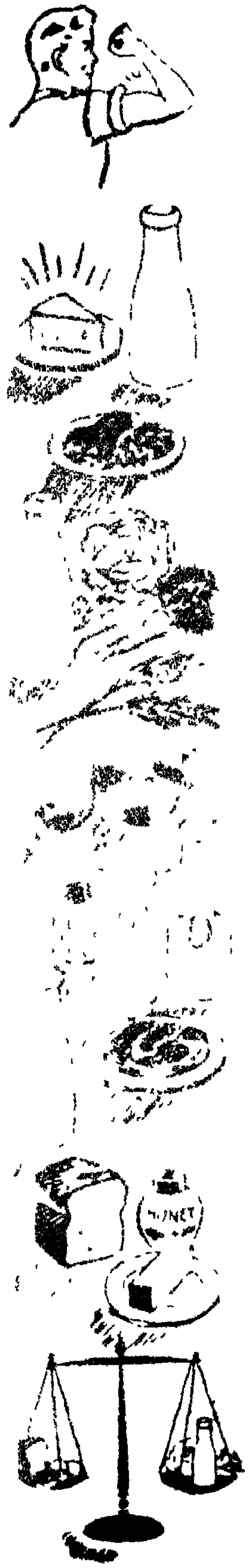
On the other hand, vegetable dishes have overwhelming merits they are easier to digest and have laxative properties; they are rich in vitamins and minerals; their freshness or otherwise can be gauged easily; and they cool the system and are, therefore, ideal for a tropical climate. Moreover, a vegetarian diet is known to promote longevity.

An important requirement for

(Continued on p. 32.)

TO HELP YOU REMEMBER

Body Building and Protective Foods . . .



PROTEIN is used to build and repair all tissues, especially muscles

Supplied by cheese, eggs, masur, mung, chana, urad, kabli matar, nuts, cocoa and chocolate

MINERALS build and repair the body and keep it in running order We use many kinds Some of the important ones, according to present knowledge, are:

Calcium—With phosphorus and vitamin D helps make teeth and bones hard Supplied by milk, cheese, beans, cauliflower

Iron -Builds red corpuscles which carry oxygen in the blood from the lungs to cells Supplied by spinach and raisins.

VITAMINS help us grow and keep healthy Ones we know most about are

Vitamin A-- Helps us grow and resist diseases of the breathing passages and eyes Supplied by milk, cream, butter, cabbage, carrot, spinach, mango, papaya

Vitamin B₁- Promotes appetite and helps to prevent poor digestion Supplied by orange juice, ground-nuts, grapefruit, tomato, greens, raisins, bananas, Persian dates

Vitamin C IS needed for healthy teeth and gums It is destroyed by cooking except in a few acid foods such as tomatoes Supplied by cabbage, lettuce, peas, radish leaf, oranges, lemons, amla (nellikai)

Vitamin D Helps calcium and phosphorus build and maintain bones and teeth Supplied by eggs, cod-liver oil, Halibut oil

Vitamin G Is essential to growth and to good health throughout life. Supplied by greens, carrots, grapefruit, orange juice

How Old Is Your Stomach?

OWEN S. PARRETT

HAVE you a good digestive apparatus? If you have, I am going to tell you how to keep it; and if not, perhaps I can help you to recover it. Strangely enough, most people don't become interested in how to eat right until forced by pains in their stomach.

As a boy I used to hear people talk about having dyspepsia. Now it is more accurately labelled gall-bladder disease, ulcer of the stomach, or chronic appendicitis. Today we have many gadgets to help us get the right label on our aches and pains. Pains are at least a little more interesting if you give them a high-sounding name, a malady that none of your friends may happen to have.

The stomach and other digestive organs were made to last a long lifetime, and they do good work if you follow the rules of the game. Nearly all sickness is preventable if you only start in time.

You say, Why worry about what and how to eat so long as you don't need to? One thing is sure. If you don't eat right your indiscretion will catch up with you sooner or later. When it does it may mean surgery or lifelong impairment, so that you can't eat this and you can't eat that. None of us like that experience.

The rules of the game are quite simple and easy to follow. Since one of my hobbies is diet (*diet*, by the way, is far and away the most important word in the medical dictionary), I am going to give you the results of my forty years' study and observation. There are some do's and don't's that may be easily followed.

I will give you thirteen rules of eating that I consider of major importance. It may pay you to cut out these rules and hang them beside your breakfast table.

1. Avoid late hearty dinners. When possible, have the heavy meal at midday; if impossible, have dinner as early as you are able to manage.
2. Eat slowly and chew thoroughly.
3. Avoid tea, coffee, and cola drinks because of caffeine content.
4. Avoid spices and condiments such as pepper, mustard, vinegar, catsup, and pickles.
5. Substitute lemon juice for vinegar in salad dressing when making it at home.



6. Cook vegetables barely done, over-cooking tends to destroy the vitamins.
7. Avoid eating highly acid fruit at the same meal with coarse vegetables. The combination may cause gassy indigestion.
8. Avoid custards or rich puddings containing milk, eggs, cream, and sugar combined.
9. Use baked or boiled foods freely. They digest more easily than fried foods.
10. Avoid drinking heavily with meals. Large amounts of water dilute the digestive juices and favour delayed digestion. Drink freely between meals.
11. Avoid processed or common cheese. You may use curds and cottage cheese safely.
12. Avoid refined and processed foods such as sugar, white bread, and all white-flour products

(polished rice, thickly peeled potatoes, white macaroni).

13 Make your meals simple, avoiding complicated mixtures or varieties at one meal. Never take a bite of solid food between meals.

I never like to tell my patients to do something without telling them why. I never like to do anything myself without knowing why I do it. Here are brief reasons for my thirteen dietary rules:

1 The stomach needs a rest period, and your sleep will be sounder if digestion is well along before you retire.

2 Chewing your food will increase the juices all along the digestive tract. The finely pulverized food prevents gassy indigestion and enables you to get more good from less food.

3 Coffee, tea, and cola drinks irritate your stomach and redden the gastric mucosa. They may often bring on irregular heart action, besides interfering with digestion. The contained sugar gives you calories without vitamins and minerals, a diet that may bring you ill-health.

4. Spices and condiments contain no food value. They irritate the alimentary tract as well as the liver and the kidneys. Their presence in the blood stream is a disturbing factor to normal healthy function of liver and kidneys.

5. Vinegar contains acetic acid. When acetic acid is concentrated (as in glacial acetic acid) it is good for removing warts and moles. It is in no sense a food. It will hobnail your liver more quickly than whisky or gin in equal amounts. It has no use in the body. The craving for sour flavours is natural, representing a demand for Vitamin C and natural fruit acids, both important in maintaining health of blood vessels and organs. Lemons used moderately help you keep healthy and postpone aging processes.

6. Vitamins are destroyed when food is over-cooked, especially vegetables. Five or six minutes is long enough to cook cabbage. Other vegetables require somewhat longer cooking.

7. When fruits (which require almost no stomach digestion) are held in your stomach until the vegetables are ready to pass through, there may be fermentation, a frequent cause of indigestion.

8. Milk and sugar is a rich mixture that if used frequently and in large amounts may disturb the digestion. When eggs are added the result is intensified.

9. Coating food with grease as in frying prevents the digestive juices from reaching the food, rendering digestion difficult or impossible

10 If your digestion is slow and faulty, take less liquid with meals and chew thoroughly for best results. Often the eating of only dry oven toast lightly touched with cold butter for several meals will straighten out a badly upset digestive system.

11. In the ripening of processed cheese, certain putrefactive bacteria develop; whereas in cottage cheese and curds lactic-acid bacteria, which tend to prevent putrefaction and the formation of harmful by-products, develop.

12. Avoid processed and refined foods, especially sugar and white flour We need nature's balance of vitamins, minerals, and bulk, found in all natural foods to keep our bodies working smoothly over a long life period. As far as possible, foods should be left as nature balanced them

13 Unlike the stomach of a cow or horse (animals that can browse all day, taking a bite at intervals), your stomach should empty one meal and have a little rest period before taking on another batch of food If it isn't given this treatment it will be like a milk crock that is not cleaned between milkings. It will go sour, and you will go sour with it. Fruit juice, requiring no digestion, is an exception, as it leaves the stomach without delay.



Strangely enough, most people don't become interested in how to eat right until forced by pains in their stomach.

Pituitary Gland Surgery for Cancer

J. DeWITT FOX

RECENTLY I assisted in a comparatively new operation for advanced breast cancer—hypophysectomy. In this operation the surgeon removes the pituitary, a small pea-sized gland that is carefully concealed in the middle of the skull. With the removal of the pituitary (once believed to be the abiding place of the soul), the spread of the cancer slows and the patient's pain lessens.

Until recently the pituitary was considered vital to life and was never removed surgically. Even in tumours of the gland itself a portion of it was left behind. Now the gland is removed, so that it can no longer exert a strongly stimulating hormone effect on the other endocrine glands of the body.

A fifty-year-old mother of two children was wheeled into the neuro-surgical operating theatre. The stage was set for one of the great dramas of modern medicine.

The anæsthetist took his place, and the three surgeons slipped into operating gowns and gloves, and drapes were placed over the patient's head.

"Are we ready?" the surgeon asked.

"Everything is fine," the anæsthetist replied. "Blood pressure 120/80. Pulse 84."

The surgeon made an incision over the scalp, laid open a small bone flap, and delicately lifted the front of the brain from the floor of the skull. The most vital structures of the human body were laid bare —the optic nerves (if they are damaged the patient may suffer permanent blindness); at each side of them, vital arteries to the brain (if they are injured the patient may have extensive hæmorrhage and possibly paralysis of one side of the body). Just beneath the optic nerves, between two vital arteries, the internal carotids, is cradled the pituitary gland.

The surgeon deftly lifted the optic nerves and chiselled away a tiny edge of bone in front of the minute gland, giving a better view and access to it with fine instruments. He carefully lifted the delicate pituitary from its bed. He had hit the target of this major surgical attack. He placed the pituitary gland in a specimen jar.

Because of the danger of leaving behind a few cells that might grow again and produce the pituitary hormones, into the little cavity where the gland had rested were placed pin-point-sized radon seeds which the X-ray specialist had brought to the operating room in specially protected containers. The radon seeds were left in the cavity to destroy the last vestige of gland, in order to make sure that no further pituitary hormone could stimulate cell growth, especially cancer growth. Zenker's solution, containing strong acids, have also been used for this purpose.

The bone flap was replaced, the scalp wound closed, and the patient returned to bed in excellent condition. The operating time was two hours.

The next morning the patient was awake and alert, asking for breakfast, after having a major operation on what was once considered the most vital endocrine gland. Best of all, her deep bone pain from widespread cancer was gone.

Why is the pituitary not now considered indispensable? The

revolution in the doctors' attitude toward the gland was caused by the appearance of cortisone on the medical horizon. It has long been known that some cancers, especially breast cancer, do not grow so fast, if at all, when the influence of the sex hormones is removed. The ovaries and the testicles secrete sex hormones at the command of the master gland, the pituitary. Originally, surgeons believed that removal of the sex glands would be enough, but this was not the case. The pituitary kept secreting some unknown substance that continued to encourage cancer growth. Now, because of cortisone and replacement hormones, doctors can remove the pituitary safely.

Among the first to perform this daring operation were the Swedish brain surgeons, Prof. Herbert Olivecrona and Dr. Rolf Luft. They approached the gland from the side of the skull. They were followed by other surgeons such as Drs Jose Schutte and Jorge Picaza, of Cuba. These men used hypophysectomy in a woman with advanced breast cancer and had dramatic results.

Neurosurgeon Bronson Ray, of New York Hospital-Cornell Medical Centre, and others, such as Dr. Robert S. Knighton, of Henry Ford Hospital, were reluctant to use the side approach. They chose the forehead opening, which gives a direct view of the gland after the brain is lifted.

Recently Dr. Olof Pearson reported seventy-nine victims of advanced cancer enjoying a new lease of life after having had this operation Patients become more active and relatively pain free. Since the operation has been perfected, it is no longer rated dangerous.

Hormone replacement after the operation is essential, and is quite simple. Medication consists of tablets of cortisone and thyroid, which is all most patients need.

(Continued on p. 32.)

TOBACCO TOPICS

JOSEPH KOLODNY, managing director of the National Association of Tobacco Distributors, sweepingly claims: "There is not one iota of proof from any laboratory, anywhere, conclusively linking smoking with harmful effects on the human anatomy."

If this is true, why is the Industry, as another official admits, "*undergoing one of the greatest* periods of change and upheaval since Americans first started smoking cigarettes?"

"The spectacular rise in deaths from cancer of the lung continues to spiral upward In 1933 only 3,400 persons died. this year that figure will reach the frightful total of 22,000! On these 22,000 obituary notices, only 15 in every 1,000 could add the note, 'non-smoker."—M Brothman, M.D., Magazine, October, 1954.

The British Medical Journal, January 9, 1955, points out a "clear cut relationship" between smoking and heart diseases shown by medical studies in both the United States and Britain "Owing to the large number of cases recorded, there is no doubt about its statistical significance."

"The best business investment I ever made," said Industrialist Ken Biddle of Sheridan, Illinois, in renewing for the third year his offer of $100 to any of his employees who swears off smoking through all 1955. In 1954 eight out of nine signing the pledge on January 1 collected at the annual company Christmas party. "Their general health is better, and they don't waste time smoking," said Biddle

Oilman-Rancher, J. S. Bridwell of Wichita Falls, Texas, is offering $50 to any of his 250 employees who doesn't smoke between March 25, and December 15. He says, "I have watched some of my very good friends become seriously ill and some to their death, all because of smoking."

One adult American in every two smokes cigarettes. This involves 60 per cent of the men and 30 per cent of the women.

The Tobacco Industry Research Committee has increased to **$1,000,000** its fund for independent scientific research into tobacco use and health, according to Timothy V Harnett, committee chairman.

Cigarette sales during 1954 sustained a 5 per cent drop following 21 consecutive years of increase. Sales for the second half of the year were 9½ per cent under the high-level sales of the second half of 1952.

"Few now doubt that abolition of the cigarette, or abstinence from its use, would be the most beneficient single step in cancer prevention available to us today."—Editorial in the *British Medical Journal,* Dec., 19, 1953.

More than $2,000,000,000 in Federal and State taxes are collected annually from tobacco products as a whole Three-fourths of the amount comes from cigarettes. In Britain, the chancellor of the exchequer, R. A. Butler, told the House: "For heaven's sake, don't stop smoking. I'm getting 600,000,000 pounds a year out of the tobacco tax"

Progress with the Artificial Heart

RENE SUDRE

THE disturbing rise in the number of cases of heart disease, caused no doubt by the strain of modern life in these civilizations of ours mechanized industrially and agitated politically, has forced medical science to attempt to find effective remedies. Two out of five die of heart disease. Affections of the heart alone accounted for 90,000 deaths in France in 1954. To this figure should be added those for damage to the arteries for which statistics are almost as appalling. It is sometimes said to be due to hereditary influences, but that only holds for a small percentage of cases. Congenital diseases are first spotted in children, whereas acquired diseases arise in the course of life: rheumatism of the heart which attacks the valves, high blood pressure which with hardening of the arteries tires the heart, damage to the coronary artery that feeds the heart itself, any failing of which proves fatal.

Surgery has revolutionized the treatment of heart disease. The lancet had boldly tackled all the organs but only of recent years has it ventured to approach the heart, believing that any interference with this vital organ would cause death. But today doctors are not only operating on the heart, draining it of blood, but stopping its beat for minutes in the certainty that it can be started again when the damage is repaired. Compared with the old ideas this is truly miraculous.

Surgery first operated on congenital malformations The case of the "blue babies" is well known, when dark blood from the veins mixes with red blood from the arteries as a result of abnormal communication between the cavities of the heart. It is generally accompanied by stricture of the pulmonary artery and renewal of blood in the lung is most inadequate. Ten years ago, Blalock was the first to attempt to open the chest and join up the arteries differently to cure defective oxygenation. Since then, other vessels surrounding the heart have been operated upon, the aorta for instance, removing the strictures found in them. Even the valves have been operated upon when they cease to ensure circulation of the blood from one chamber of the heart to the other. In this case a small opening is made in the walls of the heart through which a small lancet and sometimes the finger alone is inserted.

These feats of surgery are of course performed by very few specialists and the real solution lies in opening the heart, and draining it, circulation passing through suitable apparatus. The problem has been solved, not perfectly as yet however, because it is extremely difficult. The flow of circulation must not be broken particularly in the brain where a break of a few instants may prove fatal. The blood must continue to pass through the lungs to receive oxygen, or receive it artificially outside the organism. The first model of an artificial heart was built in the United States in 1936 by Gibbon. Experience gained made it possible for Professor Andre Thomas of the Sorbonne, fifteen years later, to present to the Surgical Congress a highly satisfactory appliance with which many operations have already been performed on animals at the Broussais Hospital.

This "perfuser" is constantly being improved upon and it is expected that it will soon be applied in human surgery. It has given excellent results as an artificial lung because it can facilitate oxygen transfer on hæmoglobin without foaming and it keeps strictly to physiological rhythm and flow With it, circulation was diverted in the dog for 30 to 45 minutes. That is the length of time required for operating on the heart. In the United States, Sweden and England, these operations have already been successfully performed on human beings.

In France Dr. Laborit's method of artificial hibernation is being used in the meantime. The patient is anæsthetized and then plunged in an ice cold bath at 4°. The body reacts against the great cold but the central temperature drops some

ten degrees. The life of the organism then slows down and in this state a variety of assaults and shocks can be borne that would be most dangerous under normal conditions. Surgical operations can be performed much more easily. Afterwards the patient is simply immersed in a bath of water at 45° for normal temperature to return. Dr Servelle was the first to use this method for operations on the heart The length of time circulation in the brain may be stopped with impunity, three minutes, has been doubled and it has thus been possible to open the heart and remedy stricture of the valves, for instance, in acute rheumatism.

In cases of congenital malformation of the heart when the operation is a long one, it is preferable to divert circulation, but it can be done without using Thomas's cardio-pulmonary perfurser by sending the child's blood into the veins of an adult who provides natural oxygenation. A pump draws from the child's vena cava and injects it into the donor's femoral vein; then another pump takes the blood oxygenated in his femoral artery and sends it into the child's aorta. A single motor synchronizes the two operations By this system, the surgeon has a heart drained for 20 or 25 minutes. Just two years ago it was applied in the case of a blue baby. The only disadvantage is absolute compatibility of blood groups. Also no bubble must ever be allowed to form in the fourfold system of tubes; it would instantly cause a clot

French surgeons are of the opinion that it were better to avoid this cross circulation and await the invention of an absolutely reliable artificial heart. That is why such tremendous interest has been shown in recent news of a new appliance by engineers in a big French electronics laboratory. This artificial

(Continued on p. 20.)

Hike for Health

DAVID I. SHAW

Get out on the trail to discover the zest in a brisk walk under the great wide blue skies.

IN THESE days of hurry and impatience often we make the mistake of thinking that the sole purpose of our legs is to take us to the nearest car or bus. Too many people feel that two blocks is a long walk, and that a greater distance requires some method of transportation

Walking increases circulation, deepens breathing, and imports tone and strength to the muscles It costs nothing and requires very little in the way of equipment. People of all ages can walk in all kinds of weather, and even those whose health is not robust may profit by moderate walking

Whether you go afield to study nature in a serious way or are restricted to a few city blocks, you can learn and enjoy as you go. Even if your walks have to be repeated over the same territory, you can enrich them by observation and reflection. Walking is an experience of the spirit as well as exercise of the body You can study the architectural details of large buildings, enjoy a neighbour's flower garden, study cloud formations, or satisfy your curiosity as to the progress of construction down the street. No matter what your mood walking can meet it.

Perhaps you feel that exercise in the morning will spark your appetite. A brisk walk is the answer. If you feel pensive and thoughtful, you may want to enjoy the stillness of the forest, sauntering down its quiet aisles in a leisurely way. Many a difficult problem unwinds itself on a walk.

Do your walking in comfort. See to it that your footwear is always well fitting and sturdy A good rule to follow is to wear shoes no heavier than needed for the trip. Low shoes are satisfactory provided they give sufficient support for the arches Nylon hose wear well and have been found suitable for ordinary walking.

Many of the modern flimsy styles of women's footwear make serious walking out of the question. Sturdy shoes with wide heels are the only sensible footwear for the hiker.

For walking through the woods and over rough ground you must have heavy boots In snake-infested areas high-topped boots are the only safe footwear. The professional mountain climber uses hobnailed climbing boots. If there is much wet ground to cover, you must wear rubber-bottomed boots or waterproof your shoes. Waterproofing compounds are available

(Continued on p. 28.)

Skin Problem of Young Adults—

A C

If your teen-ager is troubled by the pimple problem, this article is must reading. Acne can be conquered. Here's how—

ACNE, the complexion problem of young adults, is a complex difficulty that has no one cause and no single cure. The mechanism by which the skin lesions, or pimples, are formed is known. They are caused by overactivity of the oil glands in the skin, resulting in the plugging of the openings to the skin surface. Whiteheads, blackheads, inflamed and infected pimples, follow in varying numbers and sizes.

Sometimes enlargement of the oil gland itself will occur, forming a sebaceous cyst These cysts are caused by the backing up of oil when the gland opening is obstructed.

With long-standing severe acne there may be so much inflammation and infection that tissue destruction and scarring occur. Fortunately, most pitting and other forms of scarring disappear with time.

The face, neck, chest, and back are the areas most commonly affected by acne in the order of frequency. Acne appears most often in the early teens at the same time that the adult body starts developing. It may stop by itself in the early twenties, or it may continue to the late twenties or early thirties. No one can predict when it will disappear, so the advice "Leave it alone, you will grow out of it" is not sound. While it is running its course, much psychological damage can be done to the young adolescent.

Many misconceptions still exist about the cause of acne. "Bad blood," rich foods, infected tonsils, and glandular disease are but a few of the many things that have been said to cause acne Many a tonsil has been removed needlessly, unwarranted self-imposed diets have been suffered, and untold sums have been spent on false cures and complexion aids. Pent-up sexual feelings or masturbation has incorrectly been blamed for acne. From what we know, it is clear that this blight of youth is due not to any one cause but rather to a chain of inter-acting events.

Foremost of the factors causing acne is basic to them all—the surge of hormone production that occurs at the time of puberty. In addition to their role in body development, these hormones regulate oil-gland activity of the skin. An excess of certain hormones can cause an over-abundance of oil or sebum. Someday we probably will discover how to re-adjust the balance of hormones during this period of development to control the oil-gland secretion. At present we are not always able to do so.

In some young people, but by no means all, specific foods such as chocolate, nuts, and pork appear to aggravate acne. It is more likely, however, to be a general inadequacy of a well-balanced diet and the effect upon the body as a whole. Too often the nutrition of growing young people fails to keep pace with the energy demands made upon their bodies. There is no time for breakfast in the hustle and bustle of getting off to school on time. There is a great rush to get luncheon down, do a few errands, and get back to the job before the whistle blows. Chronic sub-standard nutrition leaves the body unable to cope with the stress and strain of everyday activities and their physical and emotional energy requirements. Fatigue, unrecognized or unheeded, is often a consequence of this inadequate diet; and emotional tension, although not the direct result, certainly may be aggravated by fatigue.

N E

HERBERT LAWRENCE, M.D.



Photo A V Ramamoorthy

Acne can be conquered.

Excessive oiliness of the skin is often seen during periods of increased emotional tension. Recent medical studies showed that the oiliness of the skin could be temporarily increased by the production of emotional tension in patients experimentally Have you ever noticed toward the end of a hectic day or during a period of emotional stress that your face appears shiny or oily?

And so we have a chain of events—hormone imbalance, poor nutrition, fatigue, and emotional tention—resulting in overactive oil-gland secretion, and finally acne One other factor should be added —factor X, or the unknown— sometimes referred to as the constitutional factor. Some young people with all the qualifications just listed do not develop acne with any degree of severity. We are forced to conclude that there is some other specific cause of acne. Whatever this factor is, it can make acne a real problem for one child while all the others in the same family remain free from acne.

Allowing for the constitutional factor, about which we can do nothing, we must recognize and understand the factors about which we can do something. One of the most important of these is the emotional adjustment of young people

One of the major adjustments each generation of young people must make is to the beginnings of adult sexual feelings. Adolescents are neither adults nor children, but in most ways their sexual reactions resemble those of an adult rather than of a child Yet they are not ready to satisfy sexual feelings in an adult way.

Masturbation is a substitute that many young people use for more mature forms of sexual gratification.

Masturbation was commonly considered the cause of acne, which is untrue. But even worse, some young people with acne believe that the presence of pimples on their

faces is evidence of the fact that they masturbate. This has caused immeasurable unhappiness in terms of guilt feelings and loss of self-confidence and self-esteem. It is time in this scientific age that such a completely wrong idea be dispelled.

Recently a sixteen-year-old boy who had been under my care for some time said that he wished to speak to me confidentially. With head bowed and in an almost inaudible voice, he told me that he masturbated. He explained that he knew it was causing his acne. As we discussed masturbation in its proper perspective, there was a noticeable lift in his morale. He began to hold his head high, and his voice normal—bodily expressions of the rise in his spirits. He left the office looking as if he had just dropped a great burden. I saw him from time to time in succeeding weeks. Comments about school grades being better and having done well at the track meet assured me that he was over a hurdle in more than one way.

And another source of emotional tension in young adults is the emphasis on getting along with other young people. Social acceptance and the feeling of belonging are vital to their happiness. Also youth is a period of getting out from under parental supervision although the young adult's wishes for independence and freedom are greater than his ability, either physically or psychologically to enable him to gratify these desires. Youth is a period of adjustment to higher levels of education and new work situations, with their increased responsibility. These responsibilities consciously accepted often unconsciously cause anxiety.

A young patient who had been working for about a year as a stenographer seemed sullen and depressed on my first meeting with her. Her acne was of long standing, was severe, with considerable scarring. All overtures on my part to get her into conversation failed. Our relationship continued like this for some time, until one day she said she was planning to marry and wondered whether she was ready for marriage. With this opening she finally became willing to talk about herself.

It soon became clear that she was shy and withdrawn in all her social contacts as a covering for feelings of inferiority and insecurity. It was a struggle for her to get through the routine relationships with her boss and co-workers each day When her acne flared up she preferred to stay home rather than face people. She would spend hours in front of the mirror trying to improve her complexion, but inevitably making it worse by squeezing or picking at her acne lesions.

Our talks revealed among many other things that she mistrusted her fiance because she could not see why any eligible man would be attracted to her. It also became clear to me and later to her that her insecurity started before she ever had acne. She had been reared in foster homes of the worst kind and had had many hard knocks.

Under medical treatment her acne gradually subsided. With a little understanding of the events of her childhood in terms of their effect on her personality and present trouble, accompanied by sympathy and understanding, she took a brighter view of her marriage prospects and life in general.

Counselling by parent, minister, physician, or friends can be an important help to the young adult with acne.

There are general principles for the treatment of acne that most skin specialists follow. The treatment can be divided into two parts First, the treatment of the body as a whole; second, the treatment of the skin.

The acne patient should receive a good nourishing diet with emphasis on food rich in protein. It is not wise to restrict any foods completely unless they have been repeatedly proved to make the acne worse. It is a good idea to supplement the diet with a mixture of vitamins particularly in vitamin B complex, as additional assurance that the patient is receiving the proper proportion of these essential ingredients of good nutrition.

Dieting in the sense of losing weight is not indicated unless the acne patient is overweight. Acne, as well as general health, profits from a minimum of sweets. Adequate sleep, rest, and physical recreation are important to general health. Moderate sunbathing is helpful in acne care.

Exaggerated concern about physical appearance is usually an indication of emotional conflict

PROGRESS WITH THE ARTIFICIAL HEART

(Continued from p. 17.)

heart, very small in size, is made entirely of plastic. It weighs less than 300 gms. and has been directly fitted to the arteries of the heart of a dog and enabled it to live for several hours.

The question is not of replacing a tired or badly formed heart with a new one, but of replacing it while the damage is repaired. That would be a great step forward and "physiological" surgery, to use the expression of the late Professor Leriche, asks for no more than that. If circulation could be diverted for one hour, there would be time to work without haste. There are more urgent medical problems to be solved, of course, than curing very rare defects of the heart, but progress in science can often be measured in terms of difficulty overcome rather than by importance to science as a whole.

The sooner these underlying conflicts are resolved the better for everyone and everything, including acne.

The local treatment of the skin is directed to reducing the oiliness of the skin and opening the plugged pores. Frequent hot soap-and-water washings are a start in the right direction. Usually the drying effect of soap and water must be supplemented by a medically prescribed astringent Hot compresses once a day for fifteen to twenty minutes to the affected areas will help reduce the inflammation and drain infected lesions

Unfortunately, acne requires complicated treatment. While these simple suggestions may be helpful the treatment of young adults with serious acne belongs in the hands of a physician.

Use of Atomic Energy Products in Medicine

Courtesy U. S. I. S.

STEADY and increasingly important progress is being made throughout the world in using peaceful products of atomic energy to treat disease and bring relief from pain and suffering.

The medical uses of radioisotopes, or radioactive atoms, has increased a hundredfold in the past ten years, according to the United States Atomic Energy Commission's Division of Biology and Medicine, which has been one of the leading agencies concerned with developing medical uses for the peaceful atom.

Today, the Division reports, more than 2,000,000 persons each year are being benefited by the results of research in the field of atomic medicine and atomic therapy.

More than 550 hospitals in the United States and a steadily increasing number of hospitals in other countries are now using radioisotopes for the diagnosis and treatment of disease. The U. S Atomic Energy Commission has supplied radioisotopes to more than fifty countries throughout the world for use in hospitals and research laboratories.

Radioisotopes have been described by doctors as the most important discovery since the invention of the microscope. They are common chemical elements such as carbon, phosphorus, iodine, sulphur and many metals, which have been made radioactive by bombarding them with neutrons in an atomic reactor.

Radioisotopes are frequently called "tracer atoms," because they reveal their location at all times by the radiation which they emit. The radiation makes it possible for observers to follow or trace their movements as they travel within a human body.

In medical diagnosis and research, radioisotopes are swallowed or injected, and observers then follow them as they move within the body. In healing, the radiations given off by radioisotopes are used, much like radium or X-rays, to treat brain tumours, cancers, and other ailments.

Physicians were among the first to realize that there are vast possibilities for the life-saving and life-prolonging uses of radioisotopes, which are peaceful products of atomic energy They now use radioisotopes in the diagnosis and treatment of cancer, hyperthyroidism, heart ailments, brain tumours, severe blood disorders and other diseases. New medical uses for these products are constantly being developed.

"For doctors and medical researchers, radioisotopes provide an almost magical tool for learning more about how the human body works and how its functions are altered by disease," says Dr. Charles Dunham, director of the U. S. Atomic Energy Commission's Division of Biology and Medicine.

One of the most promising uses of radioisotopes is in tracking down and attacking cancers. They are used as "tracers" to locate cancers because cancerous tissue absorbs some radioactive substances more readily than ordinary tissues absorb them. In addition, their radiations treat and help to cure cancers.

Radium, once the principal material used for treating cancers, is now commonly replaced by less expensive radiocobalt, a radioisotope of cobalt. The value of radium for treating cancers justified a cost of $100,000 a gram, though it was very seldom available in quantities as large as a gram. The cost of radiocobalt, on the other hand, is about $5 for an amount equal in radiation to a gram of radium, and it is available in large quantities

Other Medical Uses

Ordinary phosphorus compounds are used by the body to build bone tissues, and if a patient is given radiophosphorus it too goes to the bones. There it is effective in reducing the production of red blood cells by the bone marrow and in this way alleviating the disease known as polycythemia vera, in which there is a dangerous overproduction of red blood cells.

A new use of radioisotopes in studying heart disease was reported by two United States scientists at a recent meeting of the International Society of Hæmatology According to the report, blood clots containing radioactive iodine are produced in the hearts, lungs and arteries of animals. Various clot-dissolving agents are then tested to see how they act in dissolving the clots. The radioactive iodine gives off rays, thus making it possible to check the precise rate at which the blood clots dissolve

Human trials, using plasmin—a natural clot-dissolving component of human blood—and other regu-

lar blood-thinning drugs are now being conducted, the scientists reported.

Another recent development in the study of heart ailments with the aid of peaceful products of atomic energy is the use of radioactive hydrogen and radioactive carbon to study the accumulation of cholesterol in the human body. Cholesterol, a form of fat, is widely believed to be one of the major causes of heart attacks.

If this research is successful, physicians may be able to trace the build up of cholesterol in the body and warn patients well in advance that they are subject to heart attacks. This would make it possible to take preventive measures.

Radioactive iodine is now being used to give relief to patients suffering from angina pectoris, and radioactive strontium is proving of value in treating small lesions and benign tumours without surgery in highly sensitive areas such as the eye. Radioactive strontium is also useful in treating post-operative lesions.

The use of radioactive iodine has a "dramatic effect" in the treatment of over-active thyroid glands (hyperthyroidism), according to Dr. Herman Branson of Howard University at Washington Dr Branson reports that he has observed patients with hyperthyroid take one drink of radioactive iodine in water and show "immediate improvement."

Radioactive phosphorus is helping scientists to learn more about the actions of disease germs of the parrot fever and virus pneumonia group. The new knowledge obtained through this research should aid physicians in combating these diseases.

Radiophosphorus has also given good results in treating leukæmia, a form of cancer which causes the body to produce too many white blood cells.

Vitamin B_{12}, made radioactive by exposing it to radioactive cobalt, is being used in the United States in a new test to determine the presence or absence of acidity in the stomach. The test is used primarily to determine if patients have pernicious anæmia. Pernicious anæmia patients do not have normal acid in their stomachs and in addition they do not produce a substance called "intrinsic factor," which is needed to absorb Vitamin B_{12}

When normal persons are given the radioactive vitamin, it can be detected in their systems, but this is not the case with pernicious anæmia patients. Thus the test will show whether patients have pernicious anæmia or some other condition as, perhaps, stomach cancer.

The circulation of the blood can be checked by means of radioactive sodium, and the exact location of any constriction in a vein or an artery can be accurately determined.

These are just some of the ways in which radioisotopes are aiding in making more accurate diagnoses of disease and in treating various ailments.

Referring to the continuous progress that is being made in the use of radioisotopes in medicine, Lewis L. Strauss, chairman of the United States Atomic Energy Commission, recently said:

"The benefits would be incalculable if cancer or one of the other dread diseases such as arthritis or heart disease could be conquered. We are on the way to these goals"



In a medical research project at John Hopkins University Hospital in the United States, radioactive iodine, a peaceful product of atomic energy, is injected into a vein in the patient's arm. A scintillation counter placed over his heart measures the amount of radioactivity there, as the iodine makes its way to the heart. The amount of radioactivity is recorded on the tape coming from the machine at the left side of the bed. The object of the test is to measure the time it takes blood to circulate from the veins to the heart and through other parts of the circulatory system, and to calculate with great exactness the amount of blood pumped per minute by the heart.

Photo: U S I S

STORY TIME

THE BOY WHO TOLD EVERYTHING

DANNY WILLIAMS

THE air felt cool on Johnny's cheeks as he walked beside Babulal.

They weren't particular friends, Johnny was thinking. But they had happened to come out of the classroom together, and so now they were walking along side by side.

For that matter, Johnny remembered, he didn't have any good friends. In fact, he didn't have any friends at all. Why not, he wondered. What was the matter?

He returned his attention to what Babulal was saying, pushing aside that disturbing thought.

". . . so Miss Samuel said that I would have to give that speech tonight, at the programme," Babulal was saying. "I don't know anything about public speaking, and just finding out about it this afternoon. " Babulal shook his head, and shrugged. "I surely wish Ram hadn't got sick!"

Johnny grinned. "I don't blame you."

Babulal said nothing for a moment, and then glanced up. "Look, tell me honestly, Johnny: Do you think that this afternoon when I gave that talk, you know when I practised it before the class - -do you think I did it OK?"

"Well, no," Johnny said. "You did it too fast. And you didn't speak clearly enough. You ran your words together. Chand speaks better than you do. If only you could slow down and speak clearly, the way he does. But you don't."

Babulal looked surprised, but didn't say anything.

"When a person gives a speech," Johnny continued, "he should



speak slowly—not too slowly, of course—but slow enough so people can get what he's saying. And he should speak clearly and distinctly. He shouldn't run his words together, the way you do.

Babulal laughed a little nervously, "Well," he said. "I suppose I asked for it!"

Johnny glanced up.

Babulal met his eyes.

There was a moment of silence.

"Look Babulal, I was only telling you. You asked me," Johnny said.

"Sure, sure," Babulal said. "Well, I'll be seeing you. I'm going to stop at Ram's house and see how he feels."

Babulal left and Johnny continued on alone, wondering what he had done wrong this time

People were just arriving when Johnny reached the auditorium that evening. He sat down about halfway up the rows of chairs, and waited for someone to sit near him. He wanted to talk to someone He glanced round, but none of his classmates had arrived yet.

A woman and a man sat down on the chairs in front of him. The woman, smiling, turned around and asked, "Are we in your way? I know this hat is kind of high "

"Yes, it really is too high," Johnny said. "But I'll be glad to move."

"Oh, but . . ." the woman began.

Johnny got up and moved.

The woman looked at her husband, and then at the stage, where the curtain was stirring slightly as preparations were made behind it.

The programme was almost ready to begin. On the chairs near the front, and on rows behind him, Johnny noticed that his classmates had gathered. Johnny motioned to some of them to sit near him, but they all decided to sit somewhere else.

He began to feel conspicuous. He didn't like to be the only one sitting alone, yet what could he do?

Suddenly he felt hurt, and he stared at his hands a long time before he looked up again.

Babulal gave his speech well, in spite of his lack of preparation And then the programme was over, and Johnny got up.

Maybe he could talk to Babulal for a moment before going home. He felt so very left out.

Babulal was off-stage, in a room near the back, talking with his teacher when Johnny entered. "Hallo," Babulal said, grinning.

After his teacher had left, Babulal turned to Johnny.

"Well, how'd it go?"

Johnny shrugged. "You did pretty well, considering. But you still talked too fast. Why didn't you slow down the way I told you this afternoon? You would have been a lot better."

"Yes. Well—thanks," Babulal said, and turned away.

Johnny stared after Babulal as he went to a group of boys clustered at the rear of the auditorium.

Then Johnny followed after Babulal, and lingered near the group.

When the group separated, Johnny neared Babulal. "Look, Babulal, what's the matter? You asked me and I told you. Why did you get angry?"

Babulal paused for a moment and looked straight at Johnny. "Don't you know?" he asked. "Don't you have any idea why I got angry, or why everyone else gets angry with you?"

"No, I——" Johnny stopped "I ——"

Babulal smiled. "Johnny, why do you talk the way you do? Why are you so blunt? I mean, after all, there is more than one way to say something."

Johnny frowned. "I don't get you at all," he said. "You asked me to tell you how you did, and so I told you what I thought. I was honest. And now you get cross I don't get it at all."

The auditorium was empty now, and some one had turned off the main lights. On the stage several students were putting away props that had been used in the programme, and were sweeping the stage.

Babulal's face was only a shadow in the darkness of the empty auditorium, but a light reflected in his eyes. His voice was unconsciously soft.

"Look, Johnny, someone's going to have to paint the picture for you, I guess. Don't you see? When someone asks you what you think of something, it doesn't mean that you don't need to use tact. You have to tell him in a nice way. I knew what you meant, and I tried not to get angry with you when you answered my question the way you did, but. . . ."

Babulal paused and shook his head. "It took a lot of—of self-control not to get mad with you. I mean, it was pretty strong stuff, those things you were dishing out to me."

On the stage someone dropped a folding chair. The noise echoed through the empty hall.



Then Johnny asked, "What do you mean? I know nobody likes me, but. . . ."

"How would you like it if I told you you were really awful? Suppose I came right out and said that? When anyone asks you how you feel about something you reply in such a blunt way that they feel insulted. People don't like to be knocked They want the truth, but they want it politely." Babulal paused, and then said, "You see you feel insulted and hurt right now. I came out and told you the truth the way you've been telling it to me and the others."

Johnny swallowed, but didn't say anything.

"And you have a right to be angry with me. Sure, you asked me what was wrong—but I didn't tell you in a nice way I told you bluntly, and cruelly. I could have said it in a nicer way, I think, and still have been just as truthful, but I wouldn't have hurt you or made you angry with me"

Babulal stopped then, and the silence of the empty auditorium could almost be felt.

"I—I didn't mean to give you a sermon like this. But someone had to tell you, I suppose," Babulal said.

Johnny stared into the darkness, and then at the row upon row of empty chairs "Somehow," he said at last, "I never thought of it like this."

Far away, in another part of the building, a door slammed, and there followed the sound of people walking down the outside stairs. Then the silence grew deeper.

"Well, I guess we'd better go or we'll be locked in here all night," Babulal said, laughing a little."

Johnny followed him wordlessly into the night. He felt hurt. No one had ever talked to him frankly before. But then he realized that he had been doing the same thing to others for as long as he could remember.

Babulal had at least tried to be kind when he talked to him, but he had never tried to soften his own remarks.

He glanced at Babulal now as he walked along the street.

"Thanks, Babulal." he said. There was a pause, then, "Do you think if I change now, and watch the things I say, I can win back my friends?"

Babulal glanced at him. "It's worth a try, isn't it?" he grinned.

Johnny grinned back. "I'm going to try, Babulal And—and thanks for telling me"

They walked on.

School would be better now. Johnny knew.

And it had all been such a simple thing All what had been needed, really, was just a spot of tact!

HOMEMAKERS' HELPS

PARENTS AND THEIR HELPER

M. Ninaj Larson

ARE parents left alone to labour in their own strength as they go about their work of bringing up their children? Sometimes it seems as though some children will never learn to speak kindly, or to show unselfishness, or not to quarrel, or to be neat and orderly, or to develop those positive traits of character all parents wish their children to possess. Too often some children seem to have a tendency toward evil. Both the father and the mother—though perhaps more often the mother, since she spends more time with the children—may give in to discouragement as they fail to see the progress in character development that they long to see.

But there is no need for discouragement. Every mother and father has a kind and loving Father in heaven who understands the trials and labours of His creatures. God is ready to give parents all the wisdom, help, and understanding that they need to bring up their children.

Let us seek God and approach Him with our problems. He is closer to each one of us than we realize. The Creator of the Universe has a mind to His children. He will impart His strength to us He will teach us to exert an elevating and ennobling influence in our homes.

But parents have a work to do, too. God will not do that for us which we can do ourselves. There is to be no neglect of parental duty. When we have faithfully done all that we can do, let us tell Him so. Let us make intercession for our children. And God will help us. He will work with our humble efforts, for He loves us and sympathizes with us and is ever ready to impart to us His divine power. He is ready to hear our prayers and to give us the assistance we need in bringing up our children.

If parents approach their family problems in this way, the results will be seen in the home, in the school, in the community, in the nation.

If we wish our children to be kind and polite, God will help us to be kind and polite models for them. If parents are courteous and kind, the children will also develop similar traits of character.

But if we are accustomed to speaking crossly and to following our own wills without giving thought to the feelings of other members of the family, we may be certain that our boys and girls will not learn to be courteous, kind, gentle, and tender.

Boys and girls make many mistakes. Too often we feel that they should know better, and we indulge in fault-finding, criticism, censure. As we recognize our failure along this line and ask God to help us, He will teach us We forget that these boys and girls of ours have not lived too long. They do not have the years of experience that we fathers and mothers do. It takes them a good many years to learn to do things the way they should be done. God will help us to understand that they will be learners for some years to come He will teach us not to scold and find fault. He will give us wisdom to speak a word of wisdom and encouragement whenever we can, so as to encourage them in their efforts. He will help us to be patient, and to reprove tenderly

DRINK FOR BURN SHOCK

Lillian A. Chord

Science has revealed a solution that is most effective in relieving shock from atomic blast burns. It has been found a good drink to replace body fluids in any type of mild shock resulting from loss of blood through injury, heat exhaustion, sunburn, and accidental burns of other kinds.

You can mix it in your own home in the large quantities that should be taken to obtain relief. The simple formula is:

1 quart water
1 teaspoon salt
½ teaspoon bicarbonate of soda

For first aid to accident victims while away from home, Canada Dry Bottling Company now dispenses a soda water containing these ingredients, and it is assumed, with preventive measures now being taken against hydrogen and atom bomb attack, that other companies will begin dispensing such a formula.

It is wise to have some of this drink always in your car and to encourage road-side stands to handle it for treating emergency cases.

Of course it is not suitable for extreme shock patients, who cannot swallow, but it might be advisable to ask your physician about its use.

hen reproof is necessary. Praise nd encouragement work wonders. Of course, we do not wish our ildren to quarrel. But are we reful not to shout and scold and speak in an angry way? God ill give us the moral strength to void such unbecoming and harmful behaviour.

Are our words gloomy and oudy? He will help us, if we look Him, to speak words that will as pleasant and cheerful as sunbeams are.

Do our children show weakness self-control? Perhaps we parents eed to improve along these lines rst of all. God will give us that nderstanding that will help us in victories and control over ourlves Then we shall be better able o control our children, and consequently, they will learn to control hemselves.

The elements of a godly character are "love, joy, peace, longsuffering, gentleness, faith, and harity." These are the elements hat thinking parents long to see in heir children's characters. God vill help us in this work, for He oves us, and longs to help His reatures in the important work of ringing up the children that He as so graciously given them

HOW TO STOP SMOKING

THE best way to stop smoking is to stop! At least that is the opinion of a Scottish doctor, Lennox Johnston, reporting in the *Lancet*, a British medical journal A reformed s m o k e r himself, Dr Johnston says that the craving for tobacco must be understood and the dangers of nicotine appreciated before will power can separate a man from his pipe or cigratte

Originally the urge to smoke is a desire to be grown up or sophisticated, and this "infection" spreads among smokers

"Every smoker is, in fact, whether he wills it or not, a living advertisement for tobacco, and there are so many smokers today, and they smoke and speak encouragement to smoke so often, that the persuasive pressure on nonsmokers is powerful indeed To this must be added the lavish scientific advertising of the tobacco combines"

Tobacco also causes physical craving, for it becomes "a general analgesic against life's little, or even big, stresses and vexations."

Dr Johnston reminds every smoker that he should be frightened at the threat of lung cancer.

In a programme of quitting tobacco, the most trying period, says Dr Johnston, is the first day and night without it He advises waiting until a man has a respiratory infection, since this condition reduces the urge to smoke.

On the credit side of the ledger Dr Johnston points out the advantages of stopping The former tobacco addicts will have renewed energy, high spirits, a better appetite, a n d increased sexual potency, with no chronic coughing

Sadly enough, Dr Johnston doesn't expect very many reformed smokers until doctors themselves wake up to the dangers of tobacco And, unfortunately, today, eighty per cent of doctors are smokers.

HOUSEHOLD HINTS

Steel wool is one of the handiest hings to keep in the kitchen. It keeps our degchies shining like bright silver. It helps us clean that finely burned food from our pyrex baking dishes. It is just the thing to use on that nice stainless steelware that is becoming so popular n India these days.

If there is no garbage removal service in your locality, dig a deep pit in the back part of your compound. Each time after you put some garbage into it, sprinkle some earth on top. After about seven or eight months you will not only have taken care of your garbage disposal problem, but you will also have some good garden compost.

Don't sell all your old newspapers Keep some on hand for rainy-day play for the children They will have many hours of pleasure cutting out and folding.

RECIPES

BAKED VEGETABLES

Oil a baking dish. Cut your favourite vegetables in large pieces. A good combination is potatoes, carrots, onions, cabbage, French beans. Put them into the baking dish, sprinkle with salt, dot with oil or butter, add one or more cups of hot water Bake covered for about one hour Uncover, and continue baking for another twenty minutes.

OKRA OMELETTE

Five eggs, ½ pound okra.

Have a degchi of boiling water ready. Place this degchi on the kitchen table or some other convenient place Place the cleaned and stemmed okra into this water to parboil for 15 or 20 minutes, or until fairly tender, but not slimy Beat the eggs with ½ cup of milk; add salt Heat a little oil in a frying pan Drain the okra and arrange nicely on the frying pan. Pour the egg mixture over the okra Cook slowly. Carefully turn when done on the bottom as desired. Serve hot.

HIKE FOR HEALTH

(Continued from p. 17.)

in the shops. In winter you may need rubber overshoes, but thev add weight. Tennis shoes fitted with arch supports are worn by many people who like them for their light weight and gripping ability. On slippery mountain trails you need a sole designed to prevent slipping Woollen socks are used almost universally with heavy boots.

When hiking, give your feet good care. Bathe them frequently and change to clean socks. Give prompt attention to blisters. In fact, when you notice chafing, apply a strip of adhesive tape to prevent a blister.

When going on a long hike, take an extra wrap for stops. There is danger of becoming chilled after vigorous exercise unless you put on more clothing when resting, especially on windy mountain peaks

You need some easy way of carrying equipment when hiking. A light knapsack is efficient and convenient, for it leaves the arms free.

One good standard knapsack is about 12 by 14 by 5 inches in size and has six pockets. It can be purchased reasonably at sporting goods stores It is large enough to hold a canteen, lunch, first-aid supplies, camera, notebook, compass, and other oddments. If you do not need a carrier as large as a knapsack, you may pack necessary supplies into a small parcel and carry them in a belt pouch or coat pocket.

Thousands of people find real joy in serious hiking—getting off the highway and hitting the wilderness trail for some hours or days. All over the land interested persons have opened up hundreds of footpaths leading to places of scenic and scientific interest. You will have an opportunity to study nature under favourable conditions. You might see a browsing deer or a mother partridge with her brood.

To hike an upland trail with good companions—chatting along the way, drinking at an ice-cold mountain spring, resting in the shade of a fragrant evergreen, and revelling at trail's end in a breath-taking scene--this is one of life's richest experiences.

When the spell of hiking really gets into your blood, it remains. Once while we were resting on one of the trails to the summit of Mount Washington, in New Hampshire's White Mountains, a middle-aged man came puffing along the trail. "I'm trying to keep up with my mother," he said. On the summit we saw her--a vigorous woman of seventy years!

Family hiking binds parents and children together. It makes a good change in the humdrum routine of life. Out there on the trail you can really have fun together, making merry over the difficulties of the way, singing near the end of the path to keep your minds off tired legs, and enjoying a lunch the whole family helped to pack. Food never tastes better than after a long hike.

If you are hiking on a highway, you should always walk on the right side, facing the on-coming traffic. At night wear something white as an added precaution against being struck by an approaching vehicle.

While hiking conserve your energy wherever you can. On a woodland trail it is easier to step over a log than to lift one's weight onto the obstruction and then jump down. When starting to climb a mountain make your gait slow at first, with frequent short steps for rest. After a time you will fall into an easy, natural stride that you can maintain happily for hours.

The ability to walk long distances tirelessly is a worthy achievement. It not only enables you to reach many places inaccessible by other means of transportation but gives you a certain sense of confidence and independence.

Life is hiking on the trail. It is not all easy going—there are ups and downs. Sometimes we stumble, but do not become discouraged We get up and go on. We progress by our own efforts, lending each other a helping hand at fords and slippery places. On our journey we meet some very fine people and have some rewarding experiences Finally, at the end of the way, we reach the goal of our endeavours —if we have kept on the right path

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DADDY

A Small Edition of God

(Continued from p. 9.)

mental, physical, and spiritual health

We need to take our business of being fathers more seriously and spend more time with our children.

Recently I read the parable of the Prodigal Father. It was written by Blake Godfrey for the Father and Son League. I quote it here because I believe it contains a lesson for all fathers.

"A certain man had two sons, and the younger of them said to his father:

" 'Father, give me the portion of thy time, and thy attention, and thy companionship, and thy counsel and guidance which falleth to me.'

And he divided unto them his living in that he paid the boy's bills, and sent him to a select preparatory school and to dancing schools and to college; and tried to believe that he was doing his full duty. . . .

"And not many days after, the father gathered all his interests and aspirations and ambitions, and took his journey into a far country, into a land of stocks and bonds and securities, and other things that do not interest a boy, and there he wasted his precious opportunities of being a chum to his own son.

"And when he had spent the very best of his life and had gained money, but had failed to find satisfaction, there arose a mighty famine in his heart, and he began to be in want of sympathy and real companionship And he went and joined himself to one of the clubs of that country, and they elected him chairman of the house committee, and president of the club, and sent him to the legislature. And he fain would have satisfied himself with the husks that other men did eat, and no man gave unto him any real friendship.

"And when he came to himself, he said: 'How many men of my acquaintance have boys whom they understand and who understand them, who talk about their boys and associate with their boys and seem perfectly happy in the comradeship of their sons, and I perish with heart-hunger? I will arise and go to my son, and say unto him: "Son, I have sinned against heaven and in thy sight, and am no more worthy to be called thy father. Make me as one of thy acquaintances.' "

"And he arose and came to his son But while he was yet afar off his son saw him and was moved with astonishment, and instead of running and falling on his neck, he drew back, and was ill at ease. And the father said unto him: 'Son, I have sinned against heaven and in thy sight, I have not done my duty by thee, and I am not worthy to be called thy father Forgive me now and let me be thy chum.'

"But the son said 'Not so. I wish it were possible, but it is too late. There was a time when I wanted to know things, when I wanted companionship and advice and counsel, but you were too busy. I got the information, and I got the companionship, but I got the wrong kind, and now, alas! I am wrecked in soul and body, and there is nothing you can do for me.' "

Fathers, we can fill a place in the lives of our children that no one else can. It is not enough to pay the bills. We must set aside for our children time—time to romp and play, time to counsel and advise, time to admonish and discipline, time to love and be loved.

How about a New Year's present for your children—an hour or two set aside for them each week, more if you can possibly allow it? It will be the best investment of your life, yielding present rewards of love and confidence as well as maturation dividends of secure, happy young people.

To the extent that we love and honour our heavenly Father so will our children all their lives.

THE BEST HOBBY OF ALL

(Continued from p 7.)

and understanding If we follow in His steps we can do no less than look about us for opportunities to lift someone's spirits by sharing our happiness with him.

This hobby works the other way around too. If we are a bit downhearted, helping others will make us forget our own unhappiness It will pull us out of our own slough of despond and put a song in our hearts.

Most people respond quickly to a smile But at times you may have to be persistent in your efforts You will get a bigger thrill when you break through reserve—perhaps years of reserve—and reach the warm, responsive heart of someone who needs the cheer you offer.

A time or two people have looked at me in astonishment or suspicion when I first smiled at them The next time they managed a little smile that vanished almost as quickly as it came, but it showed me they really wanted to be friendly. Perhaps they didn't quite know how They may have been shy and built up a wall of reserve to protect them from slights. More often than not slights are not intended, but who can know this without reading the other person's heart?

The person who does not respond readily to your friendly smile may be just the one who needs the smile, the pat on the back, for courage to face the future.

We often stand in our own light, and we would be happier if we would move self out of the way In doing so we would make it possible for ourselves to see others. The real secret of a happy life is in forgetting ourselves in trying to help those about us.

The friendship hobby will help you to develop better personality. The foundation of all well-developed personalities is kindness, which is just another name for love. Love to God and love to man as continuously shown by Jesus will make you happy and help keep you healthy.

During holiday seasons, you may wish to share your good times with someone who lives in a room and cannot prepare a family dinner or be with his family. There are many



students attending colleges and universities who cannot get home for vacations. They would be delighted to be invited to your home, and they have much to offer a friendship.

You may wish to entertain a student from another country. One year my family and I entertained a national from Switzerland and another from Bolivia. I cannot begin to tell you of the interesting time we all had.

Friendliness is the best hobby of all. As you ride it you will be surprised at how your zest for living picks up and your interests grow.

GARDENING FOR HEALTH

ON GARDENS AND TREES

D. G. Cooper

A GARDEN without trees or shrubs, is comparable to a house without a roof. A single tree, whether it is the common Tamarind or the beautiful Gold Mohur, can alter the face of the whole garden.

Trees are an essential part of the garden. A Laburnum or a Cassia planted at the edge of a lawn is unequalled in beauty and grace. A stately Cypress or Silver Oak planted with discretion and taste is unrivalled in garden ornamentation The towering Banyan and Neem trees provide a cool retreat on a warm summer day.

There are innumerable species of shrubs and trees each of which can be made to serve a definite purpose in the garden. Planting any available tree at random, is not only a waste of time and energy but can cause a garden to look "cramped" and untidy. A row of stately Cupressus Sempervirens grown on a large estate or garden is undoubtedly a grand sight. A similar row of trees in a small garden with limited space will present a ludicrous sight.

There are three important points that should be borne in mind at the time of planting a tree. (1) A tree will take years to attain maturity; hence it is absolutely necessary to make the correct choice right at the start. A trial-and-error method cannot be employed in this case as it will mean a waste of valuable time and labour. There are many large private and Government gardens located all over India. Anyone who is interested in growing trees should visit some of these gardens and inspect the habit and nature of the trees which they feel will be most suited for their own garden (2) A common mistake is made in planting the trees at incorrect distances thus hampering the growth (3) A careful selection of the specie most suited for the garden is of the utmost importance. Remember, a towering Red Cotton Tree will look out of place in front of a small cottage.

For medium or low elevations the following flowering trees may be grown with success: Amherstia Nobilis, Bauhinia, Brownea Grandiceps, Butea Forndosa, Cassia Fistula, Cassia Grandis, C. Marginate, C. Javanica, C. Multijuga, Gliricidia Maculata, Jacaranda Mimosaefolia, Lagerstroemia Flosreginae, Poinciana Regia, and Spathodea Campanulata

The following species are useful in the garden for their ornamental foliage: Ailantus Exelsa, Araucaria Cooki, Casuarina Equisetifolia, Duabanga Moluccana, Pandanus Furcatus, and Ravenala Madagascariensis

Those who possess a back-yard or even a small vacant plot should cultivate a few fruit trees. Anyone who has the slightest interest in gardening may have at some time or the other tried to grow Mangoes, Papayas, Limes, etc. The success in growing fruit trees lies in its proper cultivation. Periodical watering, manuring and pruning, are some of the most essential factors Spraying the young trees with insecticides

GARDEN CALENDAR FOR JULY

Plains

Vegetables:	Continue to make sowings of Indian vegetable seeds.
Flowers:	Transplant flower seedlings if ready. Antigonon, Imomœa, Mina Lobata and seeds of other flowering creepers may be sown. Pot Dahlia bulbs. Strike cuttings of Geraniums, Begonias, Coleus, Crotons, Hibiscus, etc.

Hills

Vegetables.	Cabbage, Cauliflower, Carrot, Lettuce, Turnip, etc., may be grown under cover.
Flowers:	Transplant flower annuals. Stake Dahlias. Manure shrubs.
Fruits.	Bud Peaches, Plums, etc.

and protecting them from strong winds and harsh sunlight, should be the basic principles employed in raising healthy plants.

The best time for planting fruit or ornamental shade trees is at the commencement of the rains. It is more advisable to obtain young plants from a reliable nurseryman than to propagate the plants from seeds. The latter process is not only tedious, but often disappointing. Fruit trees which are propagated by grafts, layers, or buds are invariably heavier yielding and take a shorter period to bear fruit

PITUITARY GLAND SURGERY FOR CANCER

(Continued from p. 15.)

About one in every four patients also needs pitressin to control water balance. This is conveniently taken in the form of a sniff powder that is absorbed by the nose.

According to the doctors at Memorial Centre for Cancer and Allied Diseases in New York, this operation will be useful in no less than thirty per cent of cases of advanced breast cancer, which accounts for some 50,000 cases annually.

It was a thrill to be present at an operation that can bring relief from pain and arrest cancer growth. As the closing sutures were placed, we breathed a prayer that soon we may find the whole answer to this dread disease. With each cancer operation the surgeon is thinking, thinking, thinking, always trying to devise something new and better to alleviate the agony and anguish of cancer.

Another advance has been made in surgery's attack on cancer; but many more advances are needed in the laboratory, at the bedside, and in the study halls to find the true nature of this killer of man.

ATTITUDES AND ALTITUDES

(Continued from p. 3.)

noses, bald heads, large ears, ponderous feet, or cadaverous frames. Many of them have found that it doesn't pay to be sensitive. A humourous outlook is better. They laugh at their misfortunes, and make a glowing success of their lives. Often the handicaps make the best prods and strongest stimulants. Attitudes result from the inequalities of life. Discipline teaches us that happiness depends on our outlook, not on money, education, race, physical vitality, or other factors.

The downdrafts, shifting air currents, and storms must be overcome before we reach the place God has for us in life. But these we cheerfully encounter, believing that a wise Providence overrules for our good. Faith sees above the clouds into the blue.

There is no limit to your usefulness if you take the attitude that your life has meaning and purpose and that you are here for a reason. Dedicate yourself to God and the good of mankind. Stretch your faith, and reach your hand up into the heavens. Your attitude of dedication will enable God to lift you up to heights of achievement. It's up to you.

THE BEST "TONICS" ARE FREE

(Continued from p. 10)

good health is exercise. Whatever form you may favour, regular exercise is absolutely essential Even if you do not play any strenuous game, you can at least go for a brisk walk. Of all exercise, walking is probably the simplest and least expensive. Yet it is depressing to see how little we exercise ourselves even in this respect and are anxious to climb into some form of conveyance to travel a distance of but a few yards.

It is our outlook on life that affects our health to a large extent If we could learn to make the most of our limited opportunities with intelligence and good humour, not only would we enjoy good health but we would be enabled to live longer.



THE DOCTOR SAYS

1 This question and answer service is free only to regular subscribers

2 No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases

3 All questions must be addressed to The Doctor Says Correspondence personally with the doctor is not available through this service

4 Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES Answers cannot be expected under ONE MONTH

5 Questions sent in on Post Cards will not receive attention

6 Make questions short and to the point Type them or write them very clearly

7 Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published Address "The Doctor Says," Oriental Watchman and Herald of Health, P O Box 35, Poona 1

?

UNDER-WEIGHT: Ques.—"My daughter 20 years old is under-weight and very thin and in spite of the use of tonics and special diet, she is not improving at all. Kindly advice me what to do."

Ans—Without examining the young lady, it is not possible to determine the true nature of her below-normal size. Of course, at the age of 20 it is not normally possible to increase in height. If she does not have some chronic disease, she should be able to put on weight by forcing herself to eat more than she is accustomed to do. You cannot put on weight without increasing the food intake Three Yeast tablets three times a day should help her appetite One teaspoonful of Cod Liver Oil twice a day would help her to put on weight.

?

OBESITY: Ques.—"My wife, 50 years old, is very fat and continues to put on weight. She suffers occasionally from flatulence She is fond of tea and coffee with plenty of sugar. Kindly outline some diet so that she can get rid of the excessive fat."

Ans—The fifty-year-old lady who is very fat must decrease her food in-take Obesity is almost entirely a question of an excess of food in-take over food needs. She must stop using sugar and should cut down the foods she is eating and eliminate fried and greasy foods and the use of ghee from her diet. She should eat an abundance of fruit and vegetables and take vitamins during the weight reducing period. A good Multivitamin tablet put out by a reputable firm is what she needs to protect her health while she is reducing.

?

ASTHMA: Ques.—"I have been a sufferer from asthma for several years, and in spite of various medicines, have had no permanent cure. Could you suggest something to effect a cure?"

Ans.—Asthma is treated by bronchial dilators, deep breathing exercises, elimination of allergic factors, high fluid intake and moving to a climate which does not aggravate the asthma in individual cases. In some cases, a careful evaluation of the diet will reveal that some type of food is responsible Elimination of that food may bring dramatic relief Ephedrine, ½ grain, is one of the most effective bronchial dilators Adrenalin in oil injections or as an inhaler spray is effective for advanced cases. There are many other products which are of value.

?

PROSTATE GLAND Ques—"I am a diabetic of 32 years standing For the last two months I have not been able to urinate normally At first our family doctor used the catheter to draw off the urine More recently, I have been taking treatment in the Tanjore Government Hospital. The doctors have made a microscopic test of my urine and have found nothing wrong there Nor have they found any bladder stone or any other obstruction Now they are giving me injections of insulin, pencillin and carbocol I do not have irritation any more, and pass 2 oz of urine every 15 minutes What causes this retention? What should I do for a complete cure?"

Ans—Without examining you, of course, it is not possible to determine the cause of your urinary complaint If you do not have a nerve lesion, which will affect the automatic control of the bladder, I would suspect the presence of a large prostate gland, but I am sure that if this was present, the doctors there would have found it It is sometimes possible to shrink this gland by the use of *hormones*. It may be necessary to remove it surgically Hot Sitz baths twice a day are also helpful in controlling this condition.

?

HEADACHE Ques—"I have a sour taste in my mouth after eating rice or sweets Frequently I suffer from headaches at noon Please prescribe something to cure me."

Ans—Sour taste in the mouth after eating rice or sweets may be eliminated by cutting down on the sweets or eliminating the sweets or by eating some other food after partaking of the rice. The headaches at noon may be due to too much sun or to eye strain The eyes should be checked to determine if glasses are necessary. Hot foot and leg baths with ice for the head will relieve most headaches.

?

PILES: Ques "What treatment can you suggest for bleeding piles?"

Ans.—Bleeding piles are treated by taking an ounce of Mineral Oil twice a day; a non-residue diet for a few days and a rectal ointment such as Nupercaine by Ciba. Astringents also are of value. A specific and curative treatment is of course, surgical removal of the hæmorrhoids Injections with Sclerosing material is dangerous and not too effective

?

WHOOPING COUGH. Ques—"My six-year-old son is now suffering from whooping cough. Kindly let me know an effective treatment."

Ans.—Aureomycin is quite effective in treating whooping cough in children It must be given under the direction and control of a well-qualified physician There is a form of pediatric drops which are easily taken by a child.

?

FOOD COMBINATIONS· Ques—"I have read that fruit and vegetables should not be eaten at the same meal. Can you please let me know in what way this combination is harmful?"

Ans—In some people, mixing fruit and vegetables produces indigestion. Vegetables *require longer periods of* digestion than ordinary fruit. It would be better to partake of fruit in one meal and have vegetables at another meal.

THE LAST WORD

A. M. A. Scores Both Smoking and Drinking in Heart Disease

Two articles and an editorial in the American Medical Association's *Journal* of February 12, 1955, directly contradict some popular notions about smoking and drinking in relation to heart disease.

"There seems now to be definite evidence that smoking, even though it may not directly effect the coronary arteries, can have a damaging effect on the myocardium [muscular part of the heart wall] No patient with coronary disease should incur the added risk to his heart imposed by smoking without first discussing thoroughly the problem with his physician."

"'Tobacco heart' is a definite clinical entity representing functional derangement of this organ due to nicotine."

"The 'protection' afforded the heart by whisky during smoking, however, is purely an illusion. The antagonism between these drugs is entirely on the peripheral circulation Whisky is not a coronary vasodilator nor is nicotine a coronary vasoconstrictor"

"Alcohol does not nullify but increases the tendency to tachycardia [excessive rapidity in heart action] and frequently induces ectopic [misplaced] beats by tobacco"

Steamy Eyeglasses

Steamy eye-glasses cause temporary blindness and many accidents. To avert this danger, rub wet fingers over a cake of soap, then over both sides of each lens.

Polish immediately with a cloth or piece of tissue paper, and steam will not cloud them

Delirium Tremens Treatment

OLD-FASHIONED Epsom salts may help overcome delirium tremens in chronic alcoholics, the American Medical Association reported. Their report was based on the findings of Dr. Edmund B Flink of Minneapolis. The average adult human body contains less than an ounce of magnesium, but a deficiency can produce muscle twitching, excessive nervousness, tremor, and even convulsions, Dr Flink said.

Chronic alcoholism appears to be an important cause of magnesium deficiency symptoms in human beings, and the deficiency can be corrected with recovery from delirium tremens in patients by the giving of magnesium sulphate—Epsom salts

Unhealthy Nation

The United States may be one of the most unhealthy countries in the world, according to Paul Dudley White, famous physician to President Dwight D. Eisenhower during his heart attack Speaking before the House Appropriations Sub-committee in Washington, Dr. White said, "Certainly coronary disease is an epidemic, and that may be true of cancer of the lungs," and the increases of both cannot be explained alone by better or faster diagnosis The high rate of heart disease seems to be more attributable to lack of exercise than faulty diet, or excessive smoking.

Exercise, says Dr. White, is especially beneficial for the muscular man, and he has a suspicion that it may be protective of the coronary arteries too.

Commenting on our easy life, Dr. White said, "We now have so many push buttons that we have stopped the use of our muscles, and that may be more important than anything else. This is a big question mark. Also our diet has become richer."

"Hard work never killed any man, hard work both physical and mental. Most cardiacs not only can work, but should. There is a limit to the work of anyone, you have to apply common sense," Dr White concluded.

"Spirometer"

A SIMPLE new instrument for detection of chronic diseases of the lungs was described before a recent meeting of the American College of Physicians The instrument, called the "Spirometer," measures the breath to detect lung irregularities. A Philadelphia doctor said the spirometer will soon be as standard as the stethoscope or the blood pressure cuff in every physician's office and will revolutionise the detection and treatment of asthma

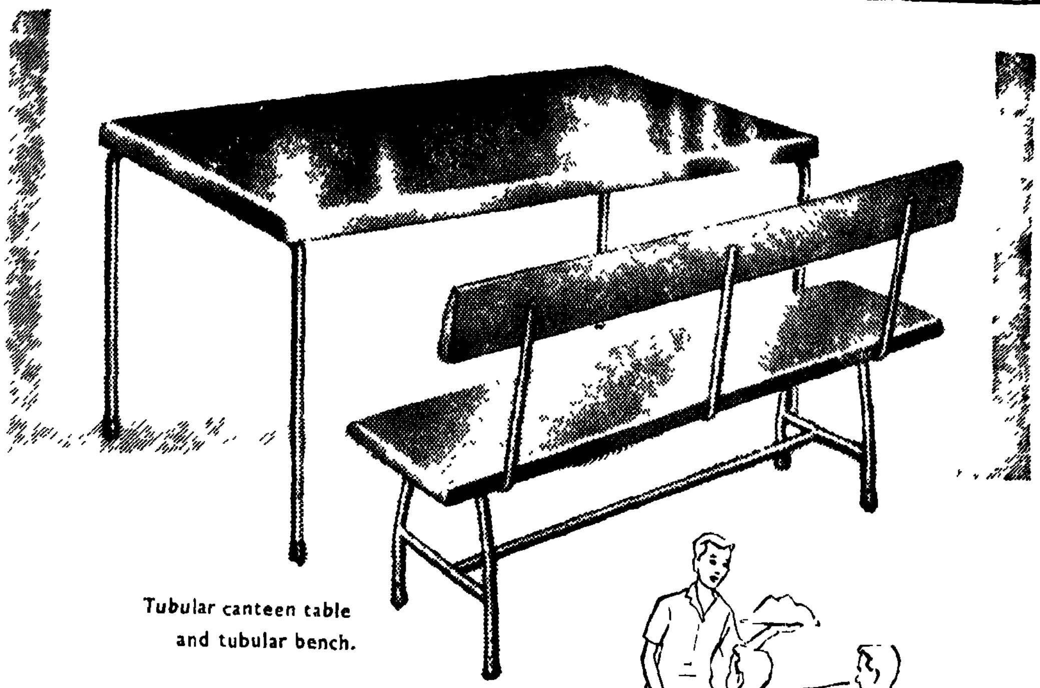
Fastest Thermometer

A THERMOMETER that registers temperature changes a billion times faster than the ordinary thermometer has been developed by Cornell Aeronautical Laboratories to measure temperatures on aircraft and missile models undergoing tests in their 10,000-mile-an-hour hypersonic shock tunnel A test run in the shock tunnel takes about one-thousandth of the second and standard thermometers are useless for such short periods of time The new thermometer's sensing agent is a film of platinum, only four millionths of an inch thick. imprinted on a glass base. The Platinum film picks up or loses heat instantly as surrounding temperatures vary

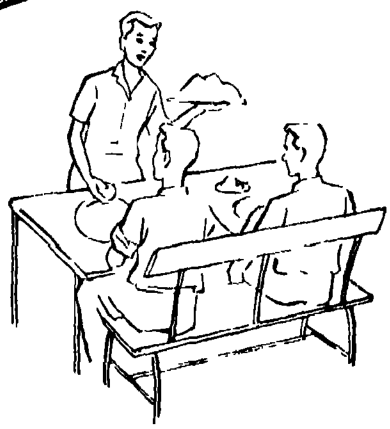
Mustard Derivative for Cancer

A NEW mustard derivative "thioetpa"—was described to a meeting of the American Association of Phathologists and Bacteriologists as the most effective all-around drug yet discovered for treating certain cancers and leukæmia The drug—a chemical cousin of mustard gas—has been successfully used to retard carcinoma of the ovaries, lung, stomach, liver mouth, and pancreas. Researchers emphasize that the drug is not a cure for cancer, but does offer great promise as a control drug in cancer therapy.

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Tubular canteen table
and tubular bench.



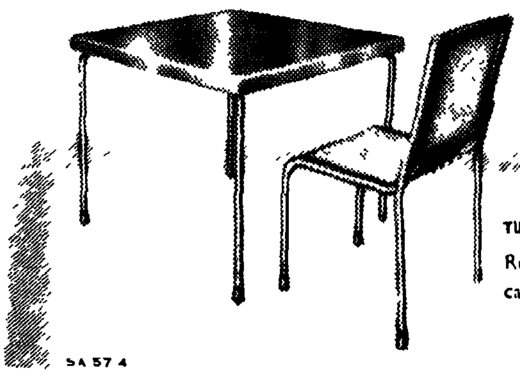
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SA 57 4

THESE CHILDREN OF EGYPT ARE MAKING HISTORY

(Continued from p 2.)

of selected villages, small groups of about 100 children are followed up to provide precise information about the value of the methods used

If it succeeds as expected, this pilot project will be the first step towards ridding Egypt of one of the main causes of poverty, misery and blindness And Egypt's school children will have helped to write a new page in the history of their country



THE UNHEEDED WARNING

"The introduction or development of irrigation schemes has always resulted in a considerable increase in the incidence and intensity of bilharziasis wherever that infection existed or was introduced by outside labourers," warned a study group of the Executive Board of WHO, calling the attention of governments to the danger of starting irrigation schemes without proper sanitary precautions in areas where snail fever was present

"The severity of the infection may be such as to cause the abandonment of an irrigation scheme created at considerable expense"

It also developed that the co-operation between health administrations and the authorities responsible for irrigation had not been as close as was necessary

The tragedy of such a situation lies in the fact that a number of countries are striving to increase their food supplies



Above

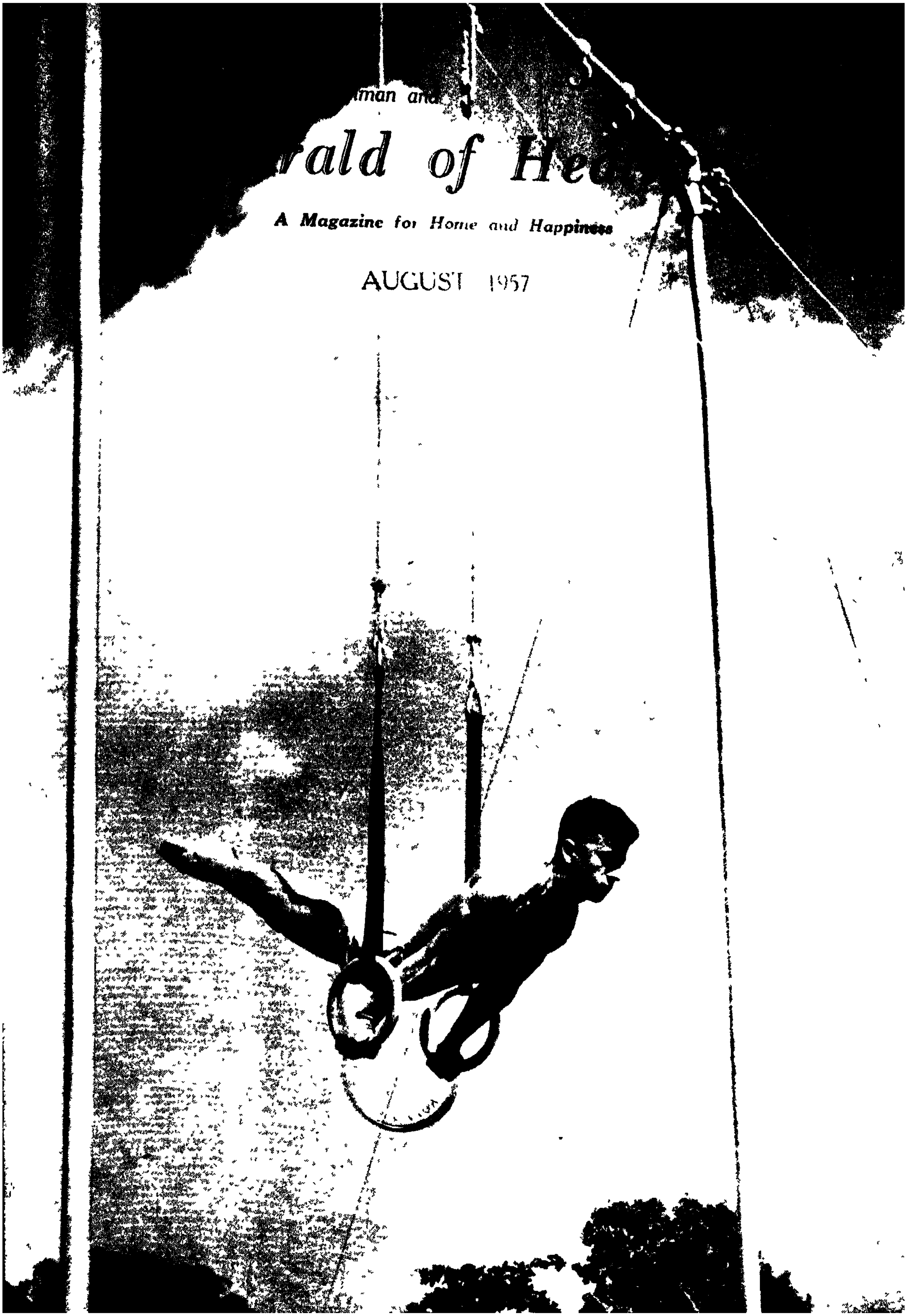
In Egypt, a farmer irrigates his land —but the snail which transmits bilharziasis is in the water which washes round his feet It has been estimated that more than half of Egypt's 19 million people suffer from the effects of snail fever and that it is responsible for one out of every five deaths The economic loss to the country has been put at £ E 80 million a year

Left

The patient is a school boy His "doctor" is a classmate In Egypt's fight against eye diseases the children themselves play a major part

Photos W H O

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A Magazine for Home and Happiness
AUGUST 1957

Ambala Hospital Offers

Low-Cost Health Services to Poor Women

K. K. DUGGAL

AS THE first shots of the First War of Independence (1857) were fired in Ambala, a new-born baby girl was hurriedly removed to safety from the thatched house of her father, an American padre. The echoes of the rebellion died out but the name of that baby girl, Jessica Carlton, rings a bell in the streets and homes of Ambala today, one hundred years after.

For the inspiring work she did for the sick and ailing of this area lives on the Philadelphia Hospital which she created fifty-nine years ago.

Young Jessica inherited the urge of service from her missionary father who made Ambala his home. Moved by the suffering of hundreds of sick women who went unattended for want of qualified women doctors (women in purdah would not go to men doctors), Jessica decided that the best way to help was to become a doctor. The young pioneer went to the United States, graduated in medicine, and returned to the country of her birth to dedicate her knowledge to the service of her helpless sisters under the banner of the American Presbyterian Mission.

For twelve years Dr Carlton dispensed relief and hope from her one-woman clinic in an Ambala street, gradually winning the confidence of the local people. She knew her childhood dream would come to nothing if she failed to enlist the active co-operation of the people she had resolved to serve. The young doctor's chance came at last when she was summoned by a Maharaja in the neighbourhood to treat the Crown Prince's wife. So pleased was the Maharaja with the results that he presented the American doctor with a gift of Rs 1,000. To this Dr Carlton added some $1,000 donated by the women of Philadelphia and built a two-room hospital in 1898.

From such modest beginnings the Philadelphia Hospital grew to occupy a prominent place on the medical map of the Punjab. Today it ranks among the best women hospitals in the State. With its new house complete with eighty beds, its own X-ray department, well equipped operation theatre, women's and children's wards and dispensing facilities for out-door patients (seventy daily), the hospital has filled a vital niche in the medical needs of this border state.

What is unique about this institution? I asked Dr P A Paul, Medical Superintendent. "The spirit of charity which guides all our actions," he summed up, adding "We cater to the middle and lower middle income groups who form the overwhelming majority of our clients. So we make it possible even for the poorest to avail themselves of our service. For maternity cases our charges range from nothing to Rs 25 per delivery. For a major abdominal operation we charge Rs 25 to Rs 50 for low-income

(*Continued on p 36*)



USIS

Student nurses in classroom. Lecturing is Sister-tutor Lily Pritam Telu Ram (standing), recently returned from a study trip in the United States

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Herald of Health

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J. B. OLIVER, M.D., D.T.M., Associate Editor

Contents

FEATURE ARTICLES

OUR COVER

If anything is sacred the human body is sacred

—Walt Whitman

Photo Vidyavrata

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Minute Meditations

THE MAGIC OF MUSIC

D. A. Delafield

MUSIC does something to us. If you don't believe it, feel your pulse when you are listening to the rapid strains of a military march. In a more quiet mood, check your heart-beat as you relax under the influence of a stringed ensemble or a restful hymn.

I sat in the dentist's chair several months ago while the amiable doctor hollowed a tooth for filling. The grinding of the drill was hardly heard and the sensation of pain nearly forgotten as I listened to a radio just three feet from my ear, providing a classical number.

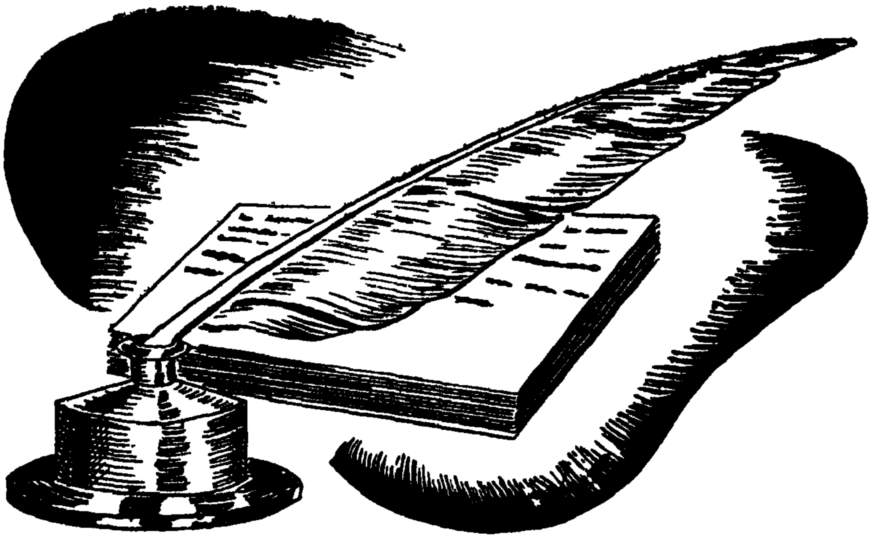
Not only are dentists using music effectively. Where it will calm nerves and quiet the human spirit, it is skilfully used in industry. Said William Green: "Music is a friend of labour. It lightens the task by refreshing nerves and spirit."

A survey made not long ago in a large industrial plant disclosed the interesting fact that the efficiency of the workers was stepped up six per cent by the playing of good music over a public address system during stated periods of the day.

The chief benefits of music is the welcome change it brings from the pressure of business and work, the bondage of worry and fear, the load of pain and suffering.

If you are a parent, give your child (or yourself) the benefit of violin, piano, or perhaps trumpet lessons. It will cost you a little money, but it will pay off in big dividends later. If your son and daughter can sing, put them under the care of a good vocal teacher. Whether they become professional singers or not doesn't matter. By offering them a musical training

(Continued on p. 29)



THE EDITOR SAYS

"PROVIDE SHELTER FOR WORKERS"

"IF INDUSTRIALISTS can keep their iron and steel in air-conditioned rooms, I find no reason why they should not provide shelter for their workers, who are, after all, human beings, and are partners in production and equal in the eyes of the law." This striking statement was made by Mr. S. G. Kazi, State Minister for Housing, in the Bombay Legislative Council on the 20th of June, 1957.

Mr. Kazi, State Minister for Housing, in the highly industrialized state of Bombay, is deeply concerned over the problem of adequate housing for the large number of industrialists within the confines of Bombay State. From his study of the problem he was recommending to the Bombay Legislative Council that the government should issue a directive requiring all new industries locating in Bombay city to erect adequate housing for their employees.

Anyone who has had the privilege of visiting the city of Bombay or the city of Ahmedabad, or any of Bombay State's other highly industrialized cities in recent years, must have seen the great need of the industrial workers for suitable places in which to live. In many sections the people are actually living under conditions in which even jungle animals would not live.

The over-crowding that exists in some of India's great cities, and undoubtedly also exists in the cities of other countries throughout Southern Asia, is most pitiful. Those who live in such over-crowded places, under such unhygienic conditions, amid unsanitary surroundings cannot be expected to be healthy, happy, contented citizens of their country. Nor can they reasonably be expected to be happy, contented, efficient workers in the plant in which they are employed. Contentment in life comes largely from satisfaction with one's living conditions, and if one is forced by circumstances to live under conditions which are anything but desirable, he cannot truly be blamed for taking a pessimistic outlook toward life and for seeking relief from his depression in many of the unsocial activities, which are so regrettably on the increase, particularly in the industrial areas.

Mankind is always seeking for that which is better, striving for that which is an improvement over that which now is. Thus, it happens that among those who are ill-housed, political agitators find their most ready and willing listeners

It is true that the average earning of the industrial worker is much higher now than it was fifteen years ago, but it is also true that food-costs and clothing-costs have increased very considerably during the same time. So that while one's income is higher, his expenses are also higher with the result that a person is actually no better off than he was fifteen years ago, and in many cases, particularly those living in cities, the worker is worse off than he was fifteen years ago

Those who have read these columns are undoubtedly aware of the fact that we have stressed in the past that young men should not leave their homes in the villages or small towns in order to go to the large cities to seek a fortune Instead we would urge them to stay where they are and contribute to the upbuilding of their own community, rather than to go to some city following a will-of-the-wisp or some mirage which so generally results in disillusionment and great discouragement for the youth

We recall one young man we talked to recently in the city of Bombay. He had come from his small town in the south of India to Bombay after having completed his high school course. Having completed his high school, he was above average in the community from which he had come so far as educational standing was concerned, but he found in Bombay that his high school training was no particular qualification. He had come with the idea that he would stay with his uncle until he found work He was certain he would have a Job within a very few days But when we met him, he was contacting people as they walked by on the street endeavouring to obtain assistance from them. He immediately asked us for work and we regretfully, of course, had to tell

him we had no work to offer. But we did take time to visit with him and to give him some advice.

In our discussion we found that he had arrived at his uncle's home without forewarning or counsel with his uncle, that he had found that his uncle and the family were living in most uncomfortable and unpleasant quarters, that they were highly overcrowded, and were living under anything but ideal conditions. With the quarters already extremely overcrowded and with food and clothing costs as high as they are in the city where one is dependent upon the markets for everything that he eats and does not have the opportunity to grow a bit of food in a garden, the burden of this young man's presence upon the uncle became almost unbearable. Difficulties arose and it was necessary for him to leave. At the time we saw him, he was sleeping on the streets and was hoping against hope that he might still be able to get work, or at least in some way get the funds with which to get back to his home. There are thousands upon thousands of such young people flocking into the industrial cities of Southern Asia today. These are in addition to the legitimate workers and their families who have obtained employment in the many growing and developing industries.

Adequate housing is an absolute essential if devastating epidemics, political unrest, communal or factional riots and actual revolution is to be prevented. Adequate housing will go far to stem the rising tide of crime and vice that seems to be sweeping over the larger cities of Southern Asia today.

As we have gone about, we have admired the magnificent modern structures that are being erected for many of the industries in the country. We admire the financial acumen of the business men of Southern Asia. We admire the workmanship of the people and the skill with which they can do such complicated tasks with so little training in so many cases. We admire the magnificent furnishings and the modern machinery to be found in many of the newer established industries of the country But as we compare these things with the hovels in which the employees most often live, we shudder at the thought of what these vast extremes must be doing to the thinking of the working class people. And we do not exclude the clerical force from this group. We find in many cases that the clerical workers themselves and what are often termed "the middle-class" people are living in as unfortunate circumstances as some of those who are classed as ordinary industrial workers.

We often ask ourselves, "How long are these people going to be willing to live under the conditions in which they are forced to exist at the present time? We believe that Mr. Kazi's suggestion is a good one We believe that if all industrialists would make provision for their working staff along with the construction of their plant, conditions such as exist today would soon be eliminated and the housing situation would not be nearly so acute. We are, however, realistic enough to know that it is an impossibility for unaided industry to follow Mr. Kazi's advice in every instance. Therefore we would urge further that municipalities, trusts and governments set about the construction of large housing projects to accommodate the people more adequately and thus relieve the existing congestion.

But we would go another step further and urge that employers give study to the actual needs of their employees and sincerely endeavour to make adequate provision for them.

We were very much interested recently to talk with an industrialist in the north of India. He is a man who has enormous responsibilities in the industrial world, but who also takes a very personal interest in the well-being of those who are employed in the organizations. We only wish that many more industrialists would be as realistic in their approach to the problems of working men as was this gentleman.

Unless men of wealth who are employers or members of boards of employing organizations will awake

(Continued on p. 30.)

Medicine Makes

SPECTACULAR PROGRESS

Over Last 50 Years

COURTESY, U.S.I.S.

SEVENTEEN chronic diseases for which there was no successful treatment fifty years ago are now controllable. These diseases include such major medical problems of the past as diabetes, pernicious anæmia and malaria.

This, together with other significant facts about mankind's progress in combating sickness and ill health, was brought out at a meeting of U. S medical scientists and clinicians in New York. The theme of the meeting was "The Hope of Mankind—Health and Peace."

An additional thirty chronic diseases, such as tuberculosis, congenital heart disease and rheumatic fever, are now partially controllable and victory over them is in sight, it was reported.

(Continued on p. 29.)

THE STUDENTS' GUIDE

ON STUDYING ABROAD—PART II

EVERYONE recognizes that travel, whether at home or abroad, can be a satisfying educational activity for an alert intelligent person But travel in itself is not a substitute for formal education. Travel, for a person with an open and alert mind, will result in a broader understanding and appreciation of the various peoples and nations of the earth Travel for such a person will help to break down barriers of nationalism and provincialism It will familiarize one with the customs, the dress, the standards of living, and most important of all, the thinking, of the peoples of other lands.

Of course, we freely admit that one can circle the globe in his travels and not have any deeper understanding or appreciation of other peoples than he had before leaving his home For travel in itself to be an educative procedure, the person travelling must set out with a determination to learn as much as he possibly can about the countries and peoples he will visit He must determine to live as much as he possibly can with the people so that he will come to know and understand them.

We recall visiting Mexico many years ago We crossed the border into Mexico The sights, sounds, smells, and signs all were different from what we had been accustomed to We visited only a few shops where English was spoken. We bought some souvenirs. We tasted the food We returned across the border. We had learned little and spent much

We remember also a recent visit to Germany. Arriving at the airport we were met and escorted to a hotel where everyone spoke English We visited friends and acquaintances. We went with them to the shops they recommended. We went with them to see the sights they thought were interesting We had a nice time and spent some very happy days with them. But after we left we realized that we had not seen Germany We had not contacted the German people. What we knew of conditions in that part of Germany we learned from the few fellow-foreigners we met while there or from the attendants at the hotel where the tourists usually stayed Again we spent much and learned little

It was different in Switzerland. There we stayed in the homes of Swiss people We only glimpsed the inside of one out-of-the-way hotel We spent little and learned much. We learned much about the Swiss people, and we would enjoy spending more time visiting in the homes of our hosts in that happy land!

So we suggest to those who plan to study abroad that they arrange with the school authorities for accommodation with some good family living near the college In this way they can gain an insight into the ways of living of those in whose land they are studying Of course, it is convenient and in some ways advantageous to live in one of the hostels maintained by the educational institution. But, as a learning experience, this does not compare with actual participation in the family life of the community. A good middle-class home should be selected—one in which there are young people, if possible



To those who go abroad to study we would also suggest that they do not plan to live like Rajahs and Nawabs. It is not necessary to spend a fortune in order to obtain a foreign education Also we would counsel those who are going abroad not to outfit themselves with much of a wardrobe before leaving home They will probably find that as soon as they land upon foreign shores, their styles in clothing are quite out of place We advise our friends to take only the clothes needed on the journey and to buy what they need upon arrival Thus they will appear as any other well-dressed student in the University.

We would advise, too, that they do not try to act like they think the people there are supposed to act. Too frequently young people make absolute fools of themselves by trying to act as they have seen people doing in the cinema pictures Such conduct is artificial by any standard and is not typical of the conduct of the better class people of good, solid, moral character.

No matter where a person goes it is not necessary for him to lower any of his standards of living so far as conduct is concerned For example, it is not necessary to smoke or drink just because you are travelling on a boat or a plane or in a foreign country. It is not necessary to participate in the dances and beer parties that so often lead to debauchery and shame. If one is a vegetarian, it is not necessary that he forsake his dietary standards. Though youthful companions may unthinkingly ridicule one for holding high

principles, they admire a person who consistently lives the sort of life he professes to believe in

While it is true that travel and study abroad may bring about changes in the student, it is not true that such study or travel must result in the destruction of his morality or his character

Every young person who goes abroad for study should recognize that wherever he goes and whatever he is doing he is looked upon by those around him as a typical representative of his country He must hold the honour of his homeland high

He must remember, too, that his reason for going abroad to study is to learn something he could not learn at home so that when he returns he may bring with him knowledge and skills which will result in the betterment of the living standards of his fellow countrymen.

CONSTIPATION

CIVILIZATION'S DISEASE

Keith W. Schnert, M D

THE primitive Eskimo language had no word for constipation. The condition was unknown to them, according to the Arctic explorer Vilhjalmur Stefansson They did, however, develop constipation after they began to eat the white man's food and live in the white man's way. Constipation is a disease of civilization Our eating and living habits have created a condition that was never meant to be

Modern man lives more and more on highly concentrated foods such as white flour, granulated sugar, eggs, and lean meat With food so lacking in bulk, the colon fills up slowly and is slow to empty

Day after day in my office I see people who eat so little bulk that an adequate daily bowel movement can hardly be expected Yet these people expect a normal movement every day If it is not forth-coming they purge themselves with every conceivable laxative carried in the neighbourhood chemist's shop

Tension and strain are enemies of natural body functions They can cause muscle tightness and spasm all over the body, including the bowel This often leads to constipation Patients may have normal bowel movements while on vacation or over a week-end, but when they return to the tension of regular work constipation re-appears

Many people never drink enough water Insufficient water and liquid intake makes the bowel contents sluggish and favours constipation

M L Rehfuss, in his book on digestive disturbances, says that constipation can be divided into three medical types atonic, spastic, and rectal

The atonic type of constipation is characterized by a relaxed state of the muscles of the colon It usually results from the excessive use of laxatives and enemas By causing continued over-stimulation of the bowel, these self-medications finally cause a weakness and relaxation of the muscles of the bowel

The spastic type is the most common constipation It is present in about ninety per cent of the cases seen in the doctor's office Because of nervous tension the muscles of the colon become excessively tight, and constipation gradually results

The rectal type of constipation occurs when the rectum, the last portion of the colon, becomes overstretched and empties poorly This condition may develop in persons who habitually disregard the normal reflex desire to empty the rectum when it is full

The treatment of constipation is often difficult, and the help of your family doctor may be needed The best treatment is always prevention

1 *An adequate* diet is of first importance in preventing constipation Eat foods high in roughage content, such as fruits, salad greens, and vegetables Your dietary intake should also include whole-wheat products, protein foods, eggs, and all dairy products

2 *Drink six to eight glasses of water a day*

3 *Your regular daily exercise* is vitally important

4 *Observe regular hours* of sleeping, eating, and eliminating. This promotes general health and helps prevent constipation

5 *Take time each day* for a leisurely regular bowel movement This habit cannot be over-stressed Hurried elimination is a bad bowel habit.

If your constipation does not clear up by the simple methods mentioned, your family doctor may suggest medicines You may need bulk laxatives, which swell when they come in contact with water, to give necessary bulk to the bowel contents Salts, mineral oils, magnesias, and enemas may be indicated but only as your doctor prescribes Self-medication usually leads to more trouble

Constipation is the product of our modern times To correct or prevent it you must maintain an adequate diet featuring necessary bulk and liquids, minimize the tensions of modern life and keep the bowel from becoming spastic; exercise enough to keep all body muscles in good shape, avoid self-medication, because it usually does more harm than good; and seek the help of your family doctor in outlining a good programme of treatment.

It is better to prevent constipation before it becomes a problem.

Books That Talk to The Blind

M. A. DeWOLFE HOWE

From *The Atlantic Monthly*

(Editor's Note: Mark Antony DeWolfe Howe is a biographer and editor who was born on August 28, 1864, in Bristol, Rhode Island. *The Atlantic Monthly* calls him their "oldest and dearest" contributor, having first written for that magazine 64 years ago. At the age of 77, Mr. Howe published his autobiography, *A Venture in Remembrance.* As his sight began to fail he was confined more and more to his apartment in Boston. However, he has continued to write poems and essays and when blindness finally forced him to give up reading, he turned to the companionship of Talking Books.)

I SHOULD like to tell something of the service science and art, in the form of literature, have combined to create for the blind, and I tell the story largely in the hope that the knowledge of this service and its availability may extend its beneficent use.

In November of 1950 I lost completely the sight of one eye. On the other a cataract had begun an advance which has continued, but not yet far enough to justify an operation. The result has been a progressive inability to read. Up to the time of losing my sight I had known only vaguely about that blessed instance of the welfare state, the Talking Books for the blind. Now it was imperative to learn what could be done to avail myself of this service. I asked my oculist to inform the Massachusetts Division of the Blind that my eyesight was so impaired as to qualify me for use of the Talking Books. This was followed by a prompt call from a representative of the Division, who brought with him one of the Division's special phonographs and a 188-page catalogue of its library of records. I have also received three supplementary catalogues describing new accessions to the library.

A condensed list of the general subjects covered by the library will suggest its scope: philosophy, religion, the social sciences, languages, pure science, literature (including poetry and drama), history, biography, fiction (in most libraries the largest offering of all). Here lay a challenge even to one who, like Bacon, would take all knowledge to be his province.

It would be absurd to enumerate the classics of which I wished to refresh my memory, and other classics somehow missed in the past. Fortunately books of recent years, if not of the immediate present, are also available. The following paragraph may give some idea of their range and value:

From "Paradise Lost" (which I never before read entire and continuously) to the poetry of Emily Dickinson; from the novels of Dostoevsky and Turgenev to those of Dickens, Hardy, Jane Austen, Henry James, Joseph Conrad, Willa Cather and such classics as "Trilby," "Peter Ibbetson," and "Huckleberry Finn"; in biography and autobiography from David Cecil's "Melbourne" to R. S. Aldrich's "Gertrude Lawrence as Mrs. A", Hesketh Pearson's "G. B. S.", Samuel Eliot Morison's "Christopher Columbus, Mariner," and Helen Keller's self-portrayals; from Trevelyan's "Garibaldi and the Making of Italy" through the war volumes of Winston Churchill to the admirable Civil War books by Bruce Catton; from much happiness with William James to less of the same with Santayana; the Bible and the plays of Shakespeare, after which one asks, "Why listen to anything else when nothing else is so good?"

From a sumptuous banquet these are merely samples of the dishes offered for tasting.

My friends often ask me about the quality of the reading—is it as good as it ought to be? My answer is that the average is high. Nothing is invariably at its best. Here, I should say, the English readers, whether on imported discs or on the many made in the United States by readers of English origin, are better than the American.

The beginner at Talking Books should note one thing: there is to



Photo U S I.S.

This law student at New York University listens to a Recording for the Blind Textbook and makes notes with Braille typewriter The device under his right hand permits him to stop and start the record at will Recording for the Blind will make a record on any subject for a blind student It has on call volunteers in many fields who will be able to read their material authoritatively

be no skipping. Many excellent books contain pages, even chapters, not necessary to the reader's salvation A glance ahead will tell the expert quickly what he can spare. Not so with a Talking Book. If you move your needle forward or turn to the next disc, you may be missing the very best thing in the whole book. You have enlisted for the duration; it is a matter of start to finish.

The reservations here expressed are indeed of negligible moment in comparison with all the pleasure and profit derived from my six years of intimacy with the Talking Books. I sometimes think that if I could continue that intimacy for a few years longer I might, apart from all enjoyment, become a reasonably cultivated person.

Thus far I have drawn almost wholly upon my own knowledge and experience It is now time to turn from the personal to the general.

In any review of the Age of Electrification the phonograph must of course be mentioned More specifically in relation to Talking Books it must receive still further mention After Thomas A. Edison had invented the phonograph he wrote an article for the May-June, 1878, issue of the *North American Review* in which he said "Books may be read by the charitably inclined professional reader, or by such other reader especially employed for that purpose, and the record of such books used in the asylums for the blind."

This nineteenth-century prophecy had to wait fulfilment until our own century came of age, and then it came about not so much through the "charitably inclined" as through the libraries of the country, especially the United States Library of Congress and privately supported organisations devoted to the welfare of the blind, notably the American Foundation for the Blind in New York, and the American Printing House for the Blind in Louisville, Kentucky

The actual production of the Talking Books—their selection and manufacturing—begins with a special committee in the Library of Congress alert for promising titles old and new, chosen from publishers' lists and current reviews. The committee receives help also from readers, blind and seeing, outside the Library. The lists so formed are submitted quarterly to the Librarian of Congress for approval. When this is given, the titles are sent, let us say, to the American Printing House for the Blind, with exact instructions for recording. The consent of authors and publishers must be obtained. Readers must be chosen Volunteers are found to lack that constancy at an exacting job found in paid professionals, preferably those with radio or stage experience. The reader's pronunciation is checked from the best of American and English dictionaries, such as Webster and the Shorter Oxford. For certain books it is important that he can speak foreign languages, especially French, as they should be spoken The job requires both capacity and taste.

When it is remembered that more than 43,000 Talking Book equipments are now enjoyed in America under the conditions here set forth, all without a penny of cost to any beneficiary, it is impossible not to imagine the waves of gratitude that must constantly be flowing toward the Library of Congress and the United States Government behind it.

Your Doctor

Bogeyman or Family Friend?

EDWARD R. BLOOMQUIST, M.D.

The attitude you take toward your family doctor will be your children's attitude also.

I MET little Janet Jones on a warm sunny afternoon last summer. Janet developed earache, and after unsuccessfully trying to treat her at home, her mother decided to bring her to my office for professional care.

Janet's entry into the waiting room was dramatic. I saw a screaming, protesting Janet being propelled through the door by an insistent but not too successful mother.

In the waiting room her loud protests continued despite the threats and pleas of the distracted mother. As I walked past the waiting room, where mother and child were still trying to convince each other, I overheard a part of their conversation. The reason for Janet's tantrum became painfully clear.

"Janet," the exasperated mother exclaimed, "if you don't quiet down this instant I'll call that doctor in there and have him stick you with needles and fill you full of nasty medicine!"

That was all I needed to hear. Janet was one of the hundreds of unfortunate children who are victims of hysteria produced by well-meaning but totally misinformed parents.

Needless to say, the examination was anything but successful. To inspect Janet's ears required the efforts of two nurses combined with mine. Reasoning at this point was futile, so our only choice was to hold Janet in order to obtain a diagnosis.

I hated to do it, but it was necessary to order an injection of penicillin. When the nurse arrived with the syringe, I think Janet could have been heard a block away.

I realized this was not the first time a child had behaved in such a manner in a physician's office, and it certainly would not be the last. This particular case, however, worried me, for the Joneses had been friends of mine for a long time. I did not like the thought that from now on Janet would be terrified of her doctor. It is possible that the emotional trauma of repeated visits to the doctor under duress can cause fear to recur in adult life.

I decided to stop at the Jones home that very evening and talk to the parents while the problem was still fresh in my mind.

I arrived a little before dusk. The family had just finished supper. Janet was playing in the back yard, so I was able to avoid a scene.

Bill and Joan Jones welcomed me warmly. After a while the conversation drifted onto the subject of Janet, and I took the opportunity to discuss the afternoon's incident. Joan was at a loss to explain her child's actions, so I had the opening I had been waiting for.

"Joan," I queried, "do you by



any chance ever make a bogeyman out of the doctor? I know from experience that parents are sometimes so upset by their youngsters' behaviour that they grasp at any available means to control them. Unfortunately, the fear of some authority such as a doctor or a policeman is an effective and easily accessible weapon. If anything is done to increase a pre-existing fear of the authority, the child's reaction borders on hysteria.

"Children resent restriction. But if they receive plenty of love and security, this resentment is lessened, and, as the child becomes older is gradually replaced by acceptance of law and order. Complete acceptance never really occurs until the child understands the reason for the law.

"It is not uncommon to find adults who still fear and hate authority. These adults lacked understanding in childhood. Their reaction toward unpleasant situations in life tends to be the same as when they were children. If they had been fortunate enough to have parents who explained problems to them as children, most of their anxieties would have been under control by the time they reached adulthood.

"A child will not mind an injection of penicillin nearly so much if he knows it will help him feel better. If, on the other hand, he is pushed into the office and confronted with a needle immediately, he is thrown into a panic. His fear is made worse by adults who assure him that it will not hurt. A child once disillusioned by a lie will not allow himself to be tricked again. He loses confidence in those who should have his trust.

"It is easy to use the weapon of fear when you want to control a child. The policeman round the corner, the dentist with his drill, and the doctor with his needle become fearful threats in the mind of an imaginative youngster. Even Santa Claus is often used as a weapon. No child wants to be on Satan's black list because he does not eat his breakfast cereal!"

Six months later it was necessary to examine Janet again. As the Jones car pulled up in front of the office, I could hardly believe my eyes. Janet opened the door herself and walked into the waiting room When the nurse called her, she went into the examining room without a single protest.

The examination was a complete success. She was quiet, and I was able to explain what I was doing and why I used each instrument When it was time for the injection I reassured her that although it would hurt for a short while, it would make her well again Janet took the injection without a sound

I asked Mrs. Jones to step into my office, and I congratulated her on the remarkable change in Janet I asked her how she had accomplished so much in so short a time She explained that she had followed five simple rules.

1 Never frighten a child with threats about the doctor, dentist, or policeman.

2. In stories and in games help your child realize these people are his friends, interested in helping, not hurting, him.

3. Reduce fear of the doctor's office by bringing your child in for a short visit when he is well This gives him a calm view of the doctor, his office, and his staff.

4 Be careful not to transfer your own fears to the child

5 When illness strikes, take time to explain in detail how each treatment will make him well. Help your child understand that the reason for the temporary pain of treatments is to make him well so that he can run and play again

1,000-CALORIE REDUCING DIET

Plenty of [illegible]

Food	Amount	A	B	C	D	E	G	Calories
BREAKFAST								
Orange juice	1 glass	134	120	130	–	–	70	100
Lemon juice	2 lemons	—	—	65	—	—	—	39
Grapefruit, 1 small, or	1 cup	—	40	104	—	—	80	100
Egg (poached) no fat	1	450	20	--	6	Good	50	66
Gluten toast	1 thin sl	—	x	—	—	—	x	41
LUNCH								
Yeast concentrate or tomato broth	1 cup	—	5		—	—	3	10
Grapefruit, 1 small, or	1 cup	—	40	104	—	—	80	100
Buttermilk or skimmed milk	1 cup	--	x	--	—	—	x	60
Soybean wafer	1	—	—	—	—	—	—	11
DINNER								
Broth	1 cup	—	5		—	—	3	10
Gluten bread, muffin, or	1 thin sl							
Whole-wheat rusk, or	1 thin sl	--	22	—	—	—	—	66
Whole-wheat bread	1 thin sl.							
Meat substitute or soybeans	3½ oz.	—	x	—	—	—	x	200
Tomato	1/5 oz.	1,500	35	30	—	—	12	30
Greens	3½ oz	1,815	15	50	–	Good	162	20
Buttermilk or skimmed milk	1 cup	—	x	—	—	—	x	60
Carrots	5 oz 2 raw	4,500	75	10	—	—	75	90
Sun bathing					Good			
TOTALS		[illegible]			[illegible]	[illegible]	[illegible]	[illegible]
Ideals (daily requirements)		6,000 to 8,000	300	500	300 to 1,200	Rich Amt.	450 to 600	1,000

The Evil of Food Adulteration

SAHIB SINGH AHUJA

WE HAVE made marvellous progress in various spheres of life since the dawn of independence but certainly today we find ourselves more demoralised than ever before. The complex problem of food adulteration afflicts us more than any other anti-social evil. We often indulge in this practice without the slightest prick of conscience. Greed and avarice for money have debased human beings, whose moral standards are at the lowest ebb and they have sunk deep into the abyss of degradation

To get pure stuff in the market has become a dream of the past It is an open secret that ghee and butter are adulterated with hydrogenated oils, dalda is mixed up with hydrogenated oils of lower quality. Edible oils like til and sarson are mixed up with linseed and other inferior oils Pure milk is diluted with water and often mixed up with sanghara flour and milk powder. Jowar atta is mixed up with wheat flour in most of our hotels Soap is adulterated with Katni stone. Superior quality wheat and rice are often mixed up with those of inferior qualities Syrups and aerated water are made out of sugar mixed up with saccharine. Coriander seeds are adulterated with saw-dust, turmeric powder with geru and yellow chalk, chillie powder with rattanjot, and black pepper with dried papaya seeds and so on. There is thus no end to adulteration so much so that even drugs, cosmetics and perfumes are not spared.

Because of unscrupulous practices of some of the dealers, patent stuffs like Pond's cream, Woodward's Gripe water, Afghan Snow, quinine, several medicinal pills, certain injections and medicines of repute are difficult to get in pure state. Perfumed oils often contain white oil, which is responsible for premature grey-hair. Those who indulge in such nefarious practices are worse criminals than murderers and blood-suckers. They are enemies of the nation by design and deliberation and merit the severest condemnation.

Adulteration of human food and drugs is widespread in India especially in big cities. The Indian capital seems to be leading in this respect. A visitor to this city is greeted with several dairies, which have sprung up like mushrooms, selling impure milk and ghee on the outskirts unchecked. A stricter control is needed by the health authorities and any laxity on their part in this regard is unpardonable

Samples of market ghee collected and tested recently at the Central Food Technological Research Institute, Mysore, showed that 3[illegible] per cent contained practically no ghee at all. 25 per cent of another batch of samples tested were found to be adulterated to the extent c

50 per cent while 33 per cent contained only traces of ghee. These facts reveal widespread adulteration of ghee sold loose in the market. A sample survey in 34 towns in India conducted by the Directorate of Marketing and Inspection, Ministry of Food and Agriculture, Government of India, recently revealed that Vanaspati is the most common adulterant of ghee sold loose in urban markets in India and this type of adulteration is prevalent in almost every part of the country

During the period July to September, 1953, eighty-four samples were collected by the officers of the Central and State Marketing Departments, and were analysed at the Central laboratories of the Directorate at Kanpur and Rajkot. While 56 of these samples showed adulteration with vegetable fat, another 20 were found to be of doubtful quality. One of them was suspected to be mixed up with goat or sheep ghee. Only 8 samples were found to be free from adulteration of any kind although some of them were of poor nutritive value.

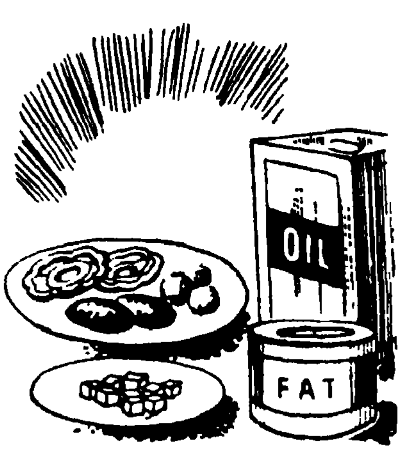
According to the annual report of the State Public Analyst for the year 1955, more than 21 per cent of the drugs and modern medicines sold in the State of Uttar Pradesh were either "sub-standard or mis-labelled." The finding is based on the 1,007 sample analyses and tests carried out.

The proportion of sub-standard medicines is believed to be the highest in the world In the United States and Britain the incidence of careless preparation and labelling is stated to be hardly one per cent

On examination of certain aspirin tablets, the Public Analyst found that these contained much more than the authorised proportion of a constituent power and thus provided a serious danger to health No less unscientific and harmful was the preparation of penicillin ointment for the eye sold promiscuously in the market

The Drug Control Act, 1940, made more stringent two years ago, provides for three years' imprisonment and fine as punishment for the manufacture or sale of spurious drugs Due to indifferent enforcement of the Act, it appears, drug adulteration has been on the increase

A relentless war on those who indulge in food adulteration and thus play havoc with the lives of



innocent people is needed. These food adulterers, who are enemies of society, must be exposed and brought to book. It is the duty of the general public to make things too hot for them and the Government should at the same time try to remove loopholes in the existing laws, which enable the culprits to seek shelter behind them.

In a country like India, where many people fail to get a balanced diet, few things could be more atrocious than adulteration of food-stuffs. Some people knowingly purchase adulterated stuffs because of their cheapness and thus unwillingly encourage the evil. Such people could not be condemned outright, but rather sympathised with because poverty compels them to do a thing which they know they ought not to do It is hoped that the evil of adulteration will vanish with active co-operation of both the public and the Government

Drug adulterers also deserve to be vehemently condemned and their nefarious activities need to be ruthlessly curbed The need for mobilisation of public opinion against food and drug adulteration and enactment of stringent laws cannot be too strongly emphasised. It is ironical that such people should be allowed to go away only with petty fines The serious nature of their crimes warrants the infliction of more deterrent punishments and a treatment similar to that meted out to their counterparts in countries of the West.



Adulteration of human food and drugs is widespread in the country

Age and Heart Disease

VARNER J. JOHNS, Jr., M.D.

One of the finest goals the aged can achieve is serenity, relaxation. It gives a heart condition its best chance.

KNOWLEDGE in the treatment of the diseases of children has been increasing rapidly. This advance has been made because of an increase in knowledge about many diseases, particularly infectious diseases. Because there are fewer deaths among infants, children, and youth, the average number of people living to old age has been steadily increasing. There are many more people over sixty years of age than there were ten years ago. Another ten years from now there will be still more people in their sixties, seventies, and eighties.

Because of the increase in the number of people in the older age groups, there is a corresponding increase in the diseases that are common to that age group. Heart disease has shown marked increase in the last few years, particularly heart disease associated with high blood pressure (called hypertension) and hardening of the arteries of the heart.

With advancing years, the body shows aging in grey hair, wrinkles, arthritic joints, and hardened arteries. All of the tissues of the body show some aging or degeneration.

The tissues or organ first to show the degenerating process varies in individuals. One person will have grey hair at forty-five and wrinkling of the skin at sixty, but he will not have hardening of the arteries until he is more than seventy. Another person will have hardening of the arteries at the age of thirty-five, as evidenced by a "heart attack" but will have no grey hair or wrinkling until a decade or two later. Then there are some people who never get grey or develop hardening of the arteries. There is no sure method of preventing hardening of the arteries, but there is much that can be done to relieve discomfort from its complications.



The two main types of heart disease in the older age groups are due to high blood pressure and to hardening of the arteries.

High blood pressure is usually without apparent cause. It is called essential hypertension. But in some persons high blood pressure may have a cause that can be traced. This is secondary hypertension. Some of the causes of secondary hypertension are Bright's disease, stricture of the aorta, tumours of the adrenal glands, toxæmias of pregnancy, and marked activity of the thyroid gland.

Regardless of the cause of high blood pressure, the results on the heart are the same. Because of the

increased work of the heart in trying to push blood against greater and greater resistance, the heart muscles become bigger, just as the muscles of the arm become larger when they are worked hard. Eventually the heart muscle reaches its peak—the point where it can no longer enlarge to meet the demands made upon it. At this point the heart fails.

A failing heart is manifested by shortness of breath, inability to sleep at night unless sitting up, because of difficulty in breathing, and swelling of the legs and ankles. Some less common symptoms are cough, weakness, and pain in the abdomen. Remember that these same symptoms may be seen in other conditions.

If you believe that you have any of these symptoms, see your doctor so that he can give you a thorough check-up and start treatment if necessary.

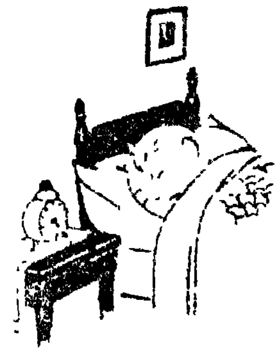
Our current treatment of heart disease with digitalis to strengthen the heart and the omitting of salt from the diet to help rid the body of excess fluid, markedly prolongs life and makes the patient much more comfortable.

Recent investigation into hardening of the arteries is opening up still newer possibilities, particularly in diet and the use of fat by the body. But these studies are not sufficiently advanced to warrant radical changes in the diet to prevent hardening of the arteries.

When there is hardening of the coronary arteries (the arteries supplying blood to the heart), the blood vessels become so narrowed that they carry less blood than they normally would. This change is not felt by the body until there is a need by the heart for more blood, in order to work harder. For example, during exercise the work of the heart may be increased several times over its activity during the resting state. Excitement also may greatly increase the work of the heart. If the heart is not getting enough blood and oxygen to do its required work at any particular time, pain will indicate this fact.

This pain typically occurs under the breastbone, and is of a severe, squeezing, pressing nature. It may radiate down the left arm. If this pain is brought on by exercise, lasts only a few minutes, and is relieved by rest, it is called angina pectoris





This kind of pain does not indicate death of the heart muscle; it means only that there is a temporary shortage of oxygen. However if a blood clot forms within the hardened artery, then the blood flow to the heart muscle supplied by that particular artery is blocked, and the muscle cannot get blood, oxygen, or other nourishing substances, therefore it dies. This is called myocardial infarction. The blood clot that causes it is called coronary thrombosis.

With coronary thrombosis, there is pain similar to the pain of angina pectoris. But instead of lasting only a few minutes and being relieved by rest, it may last for hours, and may not disappear until the doctor gives the patient a pain reliever. Such pain in the chest certainly indicates that you should consult your physician and get his help and guidance.

Although at the present time these heart and blood-vessel conditions cannot be prevented, it is cheering to remember that much can be done to prolong life and to make the patient more comfortable. If you have any of the symptoms, you should put yourself in your doctor's care.

As you approach the sunset of life, face the fact that your body will inevitably show the results of age. Remember that temperance in your physical exertions, in your diet, and in all phases of your life is wholesome. Also you must avoid concern and worry about yourself. Strive for serenity of mind and spirit.

THE SWEET TOOTH

RALPH R. STEINMAN, D.D.S., M.S.

Are sweets so precious to you that you would trade healthy white teeth for the candy habit?

EVERYTHING from itch to malignancy, from atomic blasts to arthritis, may well be studied with the aid of rats. Some of the oldest diseases that have plagued mankind may yet be conquered by a scientist working with rats. When a new disease is uncovered, one of the first things necessary for its successful study is an animal susceptible to the disease. This is often our friend the rat

Why is the rat a scientifically popular animal? Is not the horse a more noble creature or the elephant a stronger? There are several reasons why the rat is a good animal for research Perhaps first is the fact that rats can be bred rapidly in large numbers They have a short life span This means that a whole lifetime of change can be compressed into a few months Rats are easy to care for and can stand a variety of conditions Because animals can be controlled in all details, the results of any study are usually quite valid.

The old disease known as dental decay is also being studied with the aid of rats. The tooth of a rat is much smaller than a human tooth. For examination the tooth must be placed under a microscope In only a few weeks cavities develop, so that the dental scientist may know in a matter of weeks results that with human studies would require years The cavities are similar in many respects to those found in man. Younger animals are more subject to this disease than older animals. This is usually true with man also. A small amount of fluorine in the drinking water during the formative period of the teeth reduces their likelihood to disease in both man and animals. The necessity of vitamins and minerals also has been shown both in man and animal. In fact, much of the relationship between vitamins and tooth structure would not be known unless animals could be used.

It is good to know all the technical aspects of research, disease, and foods needed to make better teeth But to learn all these things would require a lifetime of study. With all the complicated experiments, what can we learn about foods and their relationship to dental disease? Is there not some work that ordinary people can appreciate, or do we have to be scientists? We want something we can apply to our everyday living to reduce the most prevalent disease of mankind.

Let me tell you of a study conducted at the College of Medical Evangelists School of Dentistry.

The researchers obtained ordinary food at the school cafeteria and they selected two types of meals. The first selection contained generous amounts of milk, eggs, fruits, legumes, vegetables, and whole-grain products No desserts were included in this diet.

The foods were prepared as simply as possible. If we pick a peach off a tree and eat it fresh, it is prepared as simply as possible But we desire to have peaches in winter. If the peach is canned with a minimum of sugar it is still a nutritious food, but it has lost a little of its value. If the peach is converted into jam or jelly, its nutritional value is largely lost

Grains prepared in a simple manner are cooked as a whole-grain cereal or made into whole-grain bread. If this whole grain is converted into white flour, its value is considerably reduced. If pastry is made from this white flour with large amounts of sugar, the value of the grain is all but lost. Vege-

tables may be prepared in such a manner as to preserve the natural vitamin content.

This diet was carefully chosen for the rats—plain foods rich in vitamins and minerals, with proteins, fats, and naturally occurring carbohydrates.

This food was fed to the animals at regular intervals. One hour in the morning and one hour in the evening was the feeding schedule, and they had nothing between meals. These animals never lacked appetite at mealtime. They were always hungry.

The foods given these animals included eggs, milk, bananas, apples, pears, oranges, raw salads, cooked vegetables such as potatoes, carrots, squash, peas, Lima beans, cereal products of whole grains, and whole-grain breads Compared on a meal basis, this diet would exceed the recommended allowance of the National Research Council by about 50 per cent for vitamins and minerals.

The rats grew well and were apparently healthy. At the end of fourteen weeks their dental examination showed that less than one cavity per animal had penetrated the enamel into the dentine The exact figure was 0 62 The rats had almost perfect teeth.

The second selection included a smaller amount of milk, fruit, and vegetables, refined or highly processed grain products, and desserts The fruits were canned with large amounts of sugar Light breads were used. Pancakes and syrup, jam, sugar, cereals, ordinary dry cereals, chocolate milk, lemon pie, macaroni, and ice cream were a part of this diet It was fed to these animals on a two-meal-a-day basis—one hour in the morning and one hour in the evening. They were given the usual between-meal snacks of candy, soft drinks and cookies.

With an abundance of food these rats were not too well nourished They did not grow well. One of them became sick and died before the end of the experiment. From all the food they ate they should have been fat, but they were not

The examination of their teeth showed a sad picture. On the average each rat had 30 7 extensive cavities The cavities were so deep that three per rat had penetrated into the pulp of the tooth If rats are subject to toothaches, they really had trouble—not simply one tooth, but three toothaches apiece

We ignored three principles in the choice of food in the second selection and in the feeding of these animals We gave them food reduced in value so far as vitamin and mineral content was concerned We gave them desserts high in sugar content. We gave them highly refined cereal We allowed them to eat between meals foods high in sugar and low—very low—in vitamins and minerals. By just these three things the teeth of these rats were ruined Are we doing these same things to our children?

Let me remind you that those in the first-selection were given their food according to these three principles. Food rich in vitamins and minerals No sweet desserts with meals—no ice cream, cake, or pie, which usually are loaded with sugar Nothing to eat between meals.

The results speak for themselves Make your choice of foods wisely, and follow healthful eating habits, and you will enjoy better health, vigour, and well-being.



Photo USIS

Sweets under severe scrutiny!



Photo Courtesy, United Cerebral Palsy Association USIS

At special rehabilitation centres in countries throughout the Western Hemisphere, victims of cerebral palsy are receiving special treatment to help them overcome their handicaps. Here a speeh and hearing therapist in a Massachusetts nursery school uses an audiometer to help a cerebral-palsied boy.

The Mod…

Cere…

Although today's victims of this disorder cannot hope to be cured completely, concerted efforts during the past decade have helped them to become useful citizens through improved methods of therapy and surgery.

ELEAZAR, a seven-year-old Venezuelan, could neither walk nor sit alone. His arms and legs moved convulsively, and at times his head lolled grotesquely. He had only partial use of his right hand, and his speech was defective. Yet he was mentally alert Another tragic victim of cerebral palsy.

Doctors shook their heads over the boy, and he was shunted from hospital to hospital. Finally, at the Children's Orthopædic Hospital in Caracas, his case was studied thoroughly and he was assigned to rehabilitation and physiotherapy. The nutritious diet, therapeutic treatment, and the company of other youngsters wrought heartening changes. He spoke more clearly, held his head erect, and even began to poke fun at himself Next, Eleazar needed surgery to correct his deformities and muscular contractions; afterward he would be fitted with orthopædic braces.

Some two years and several operations later he was drawing pictures—though laboriously—and beginning to feed himself. Nothing more could be gained through prolonged hospitalization, so Eleazar was to be an out-patient. His family had to be taught to continue his training. But when the time came to go home, the boy was inconsolable. He refused to eat and cried continuously. "You're giving me up as worthless!" he sobbed.

The poignant cry eloquently expressed the plight of the cerebral-palsied. Despite their handicaps, they passionately desire to take their place in normal society. But Eleazar was luckier than most; he had received expert attention. Too often those afflicted are automatically written off as mentally deficient They are treated as social outcasts, and their potentialities as useful citizens are ignored. Cerebral palsy is universal and ageless, yet it is only within the past decade that any sort of concerted effort has been made to do something about it.

No accurate count of the cerebral-palsied is available, but it is generally agreed that the incidence rate is probably much the same from country to country, although allowances must be made for the effect of different death rates, particularly infant mortality Also, even the most careful estimates are subject to constant revision because of the relatives' tendency to isolate and deny the existence of the victims.

Incomplete surveys in the United States indicate that there are at present around 546,000 children and adults who were born cerebral-palsied, and a continuing yearly birth rate of approximately 10,000 Thousands more become cerebral-palsied during adult life. In Cuba, rough estimates range from 12,000 to 18,000 cases out of a total population of almost 6,000,000 Brazil and Chile are planning surveys within the next two or three

years. In Rio de Janeiro alone, it is estimated, there are some 400 cerebral-palsied children, and the school run by the Sao Paulo Association for Handicapped Children has a closed waiting list of 200, with no idea of how many more there may be. The Venezuelan Children's Orthopædic Hospital treats an average of fifty cases a month. An Argentine pediatrician estimates that there are approximately 20,000 cases in his country (out of about 19,000,000 people), and in the past six years the Rehabilitation Centre for Spastic Children in Buenos Aires has treated 1,000 children

A spot check throughout the Hemisphere reveals a relatively small group of dedicated men and women, doctors and laymen alike, who are striving to focus on cerebral palsy the attention it deserves. To the last man, they are convinced that when the general public becomes fully aware of the heart-breaking predicament of the cerebral-palsied, all-out efforts will be made to help them toward self-sufficiency.

Cerebral palsy is neither contagious nor hereditary, yet it can happen to anyone—before, during, or after birth. Each of us is born with a fixed number of brain cells, which, if damaged or destroyed, cannot be replaced or repaired. These cells control our reactions,



Photo Courtesy, United Cerebral Palsy Association USIS

In an extensive research and rehabilitation programme now under way in countries throughout the Western Hemisphere, victims of cerebral palsy are being helped to become useful members of society. Here a cerebral-palsied boy practices release and grasp skills. The occupational therapist stabilizes his opposite hand to block unwanted motions.

motor and otherwise In adults, automobile accidents, war injuries, prolonged high fevers, severe asphyxia, or other similar misfortunes can bring on cerebral palsy

The condition often is caused by birth injuries, but these cannot always be laid to forceps, breech deliveries, or medical negligence. According to many authorities, cerebral palsy frequently results from anoxia, or oxygen starvation, in the moments immediately preceding birth. In the last few days of pregnancy, the baby's oxygen supply is precariously low, about the same as exists at a 33,000-foot altitude An adult could survive this condition only a few minutes, yet the baby miraculously thrives on it. But if anything happens to cut off his scanty oxygen supply during the prenatal period or during the first minutes of life, death or brain injury can result.

One young mother bitterly explained that her four-year-old daughter had cerebral palsy for another reason "I'm Rh-negative, and when Barbara was born they didn't give her a new blood supply until she was two days old. By then it was too late" That, of course, was obvious negligence.

The effects of cerebral palsy vary from individual to individual, and no two cases are exactly alike. One may walk with an awkward gait; another may be unable to control the spasmodic movement of his hands and arms. Perhaps the victim's head jerks and twists, and

Approach ....

Palsy

ELIZABETH B. KILMER

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involuntary grimaces cross his face. Speech difficulties, impaired hearing or sight, or subtle emotional disturbances also may exist. Or, of course, any variation or combination of these disorders.

Reasoning powers also may be impaired, though innumerable cerebral-palsy victims are as alert as their physically fit brothers and sisters. Medical opinions put the percentage of mentally retarded cases anywhere from 30 to upwards of a pessimistic 70. In any event, it has been pointed out that psychological testing of the cerebral-palsied is open to question because of the difficulties of evaluating the tests accurately

One U. S. father exclaimed without rancour "They tell me my daughter is mentally subnormal, but how can they know for sure? She has alternating vision, which means that she sees out of only one eye at a time—back and forth, back and forth. How can the poor child pass a test when she can't even see straight? Now they're working on a six-month-accomplishment standard that will certainly be much fairer" Her mother added quietly· "She has a fabulous memory." To prove her point, she asked her daughter the name of a Chilean who had signed her autograph book some five years before The girl recalled it without hesitation

Their child was a lovely 18-year-old, small and physically immature for her age. She walked with a slight shuffle and, because of her impaired eyesight, had to be guided Her parents' affection and pride in her accomplishments (meagre by normal standards, which are woefully inadequate in these cases) showed in every word and gesture They had brought her to the beach for a week-end, and she was obviously delighted by the sun, sand, and water—and the people around her

Because of the complexity and variety of causes, there probably will never be any miracle-drug prevention of cerebral palsy, but other means of combating the disorder are being found. For example, a young obstetrician at Johns Hopkins Hospital in Baltimore has perfected an apparatus that will give a continuous picture of the infant's heart-beat during the hours preceding birth This will enable the doctor to know if the baby is in difficulty, so that he can speed up the delivery if necessary. And competent physicians give exhaustive prenatal tests for the Rh-negative blood factor and other things that may cause trouble.

Nor can today's cerebral-palsied hope to be cured, in the usual sense of the word (little Eleazar's mistaken idea). However, they need not be left to "vegetate." It takes long hours of physical, occupational, and sometimes speech therapy. Surgery may be necessary, and the victims often must wear braces to walk or perhaps even to sit erect. Some will never walk, of course, but they can be carefully trained in the use of a hand, a foot, or the voice

In Washington, a completely handicapped young lady uses her pleasant speaking voice to sell insurance and another takes television ratings, both by telephone A dauntless young man in a wheel chair has the use of his feet only, but he paints so well that he has sold several canvases. And that is not all. He owns and runs a specialty shop equipped so that he can handle all transactions himself Another man operates a snack bar and magazine stall in a downtown office building.

A cerebral-palsied Brazilian, once certified as mentally incompetent, underwent extensive therapy for two years, had the interdict lifted, and today holds a job as an office assistant. A rehabilitated Venezuelan runs a hospital laundry Another Brazilian has organized a school office and is in complete charge of all the records.

Naturally, the story does not always have a happy ending. A cerebral-palsied girl married a poliomyelitis victim, and a perfect baby was born to them. But the young mother was soon on the



Photo Courtesy, United Cerebral Palsy Association USIS

Although victims of cerebral palsy cannot hope to be cured, in the usual sense of the word, they are being helped toward self-sufficiency through new and improved treatment methods With the aid of physical therapists this Mexican girl is learning to walk.

verge of nervous collapse. Because of her convulsive movements, she did not dare even touch her baby. The father looked after the infant, but this, plus a full-time job, soon proved too much. Finally, the child was placed with friends. The mother wants to give her up for permanent adoption, but the father adamantly refuses to admit defeat.

Most of all, the cerebral-palsied need understanding and affection. Not an approach like that of a Uruguayan taxi-cab driver who was driving a cerebral-palsied child home from the school sponsored by the National Association for Crippled Children in Montevideo "These poor children," he said to the attendant. "I don't know why the Lord doesn't take them so they won't have to go on suffering" Reacting in perfectly normal little-boy fashion, the youngster said pityingly. "Blanca, this poor man is crazy!"

Although such a child needs special therapy for complete rehabilitation, as a Brazilian school administrator made clear, "these youngsters will respond to the simplest treatment, right in the home They should be allowed normal contacts and given painstaking care With a great deal of patience, the parents themselves can teach them the basic elements of self-sufficiency. In many ways, they are much more loving—a n d lovable—than normal children, and more eager to please"

Most people who work with the cerebral-palsied seem to feel that one of their most serious problems lies in the attitudes of parents and the public Comments from doctors throughout the Hemisphere indicate that the general feeling ranges from "indifference" or "unawareness of the magnitude of the problem" to "pity" or "curiosity." All agree that increased educational campaigns are a must.

A Chilean doctor has "the impression that the public, in general, is relatively indifferent, because the problem has not been presented in mass, dramatic form" He sees the parents' attitudes as varying with their cultural levels. "Frequently," he adds, "they are far too optimistic and are disheartened when there are no quick, spectacular results from treatment Once they appreciate the situation, however, they co-operate to the fullest" A Uruguayan physician, on the other hand, vigorously denies indifference on the part of anyone, and the Mexican Association of Rehabilitation reports a general atmosphere of readiness to help the cerebral-palsied, with the parents, naturally, being the most interested

One Brazilian rehabilitation centre, which treats only charity patients, finds it difficult to train parents, who must continue to work with their children after they leave the school. The director said it was heartbreaking to see the youngsters slip back into their old ways after just a short while at home Fortunately, there are always encouraging exceptions One young couple adopted a baby girl they thought was healthy and normal Instead, she turned out to have cerebral palsy. At the age of five she was a deaf-mute, lacking any sort of muscular control, bottle-fed, and demanding the same care as an infant For a year this little girl has been a boarding pupil at the centre run by the Association for Handicapped Children in Sao Paulo. She can sit up, eat alone, and say a few words Her parents, who originally wanted to have her committed to an institution, are now busy learning how to continue the training at home when their daughter "graduates"

A Caracas physician praised the untiring efforts of the parents, who "refuse to give up in the face of tremendous odds They never lose hope that their youngsters will, with the many new discoveries in the field of medicine, become just as useful citizens as any normal children"

From the Brazilian Institute for Motor Re-education in Rio de Janeiro comes word that "passers-by no longer stare curiously at our bus-load of cerebral-palsied children or swarm around it with shock and horror written all over their faces With a kind word and a friendly smile they greet us and ask about the children's progress They've come to understand that many of the youngsters are as bright as anyone And the parents have collaborated wonderfully in rehabilitating their children. Now they don't treat them as useless, inferior beings, hide them from

(Continued on p. 28.)



RICKETS

LESTER H. LONERGAN, M.D.

Rickets is most common during the time the bones of children grow most rapidly

AMONG the best of nature's healing agencies, the cheapest and most universally available is sunshine. Yet, partly through our failure to utilize this source of health, there occurs in the United States more commonly than in any other country the deficiency disease, rickets. Accurate surveys among young children in our larger cities show that in just about a half of the infants from three to six months some evidence of this disease can be seen, sometimes in a mild form, sometimes in a severe.

Rickets is essentially a disease of infancy and early childhood, especially from six months to two years—that period of most rapid bone growth. Some children are almost certain to develop rickets unless the parents use adequate protective measures. Residence in southern California and other sunny locations does not in itself prevent rickets.

Fortunately the more severe forms of rickets are far less common today than a few years ago. An investigation made in New Haven revealed rickets in either moderate or marked severity in practically a fourth of all eighteen-month-old infants examined. It is much more common among babies artificially fed than among those fortunate ones who are breast fed Italian and coloured children are especially susceptible to rickets Likewise, premature infants and twins show such an extreme susceptibility that often in them the disease will develop to a moderate or severe degree unless proper preventive measures are taken.

Rickets is a deficiency disease in which the bones are improperly calcified and become weakened because of a lack of vitamin D. It is the minerals calcium and phosphorus that mainly impart rigidity to the bones. Ordinarily these minerals are absorbed from the food and deposited in the bones as calcium phosphate. If they are not available from the food in sufficient amount, the bones will be soft. The diet of the average child usually contains a reasonable amount of both minerals. Another factor far more frequently deficient is vitamin D. It increases the absorption of these minerals from the intestine and controls their deposit in the bones. If vitamin D is not present, no matter how generous the supply of calcium and phosphorus in the food, the body cannot use them and rickets will result.

The primary source of vitamin D is the ultraviolet portion of sunlight. When these rays strike the skin, active vitamin D is formed and carried by the blood stream to the places where it is needed.

The body's need of sunlight is the reason that rickets is a disease of sunless areas, of winter months when warm sunshine is less available, of smoky industrial cities where these healing rays are largely filtered out by smog before they can reach the earth. In the tropics, where children are commonly exposed to the vital rays of the sun, rickets practically does not exist.

Because of the lack of mineral in the bones, they become softened and deformed, especially those that bear the weight of the body. Curvature of the spine and nodular swelling at the growing ends of the long bones, notable in the wrists, knees and ankles, result. Bowed legs or knock-knees frequently occur. The enlargement of the bones of the skull gives the child a characteristic square-headed appearance. The breast bone is pushed forward, forming the so-called pigeon breast. Along the front ends of the ribs are little nodular enlargements. Since their forms suggest strings of beads, they are called the rachitic rosary.

In rickets there may be a long delay in the eruption of the teeth. At the end of the first year, instead of the usual six or eight, there may be none or only one or two The child's muscles may appear weak and flabby. Instead of the incessent activity so characteristic of a healthy child, he may be content



to sit almost motionless for an hour at a time The muscles of the abdomen being weak, a protruding abdomen results. Because of these serious effects on muscles and bones, walking is greatly delayed and growth may be inhibited

Rickets rarely appear in infants less than two months old, because it takes about that amount of time for rickets to develop to a point where it can be recognized. Its frequency is markedly increased in the third month, reaching its highest incidence from the fourth to about the eighteenth month, then declining during the next two years. Although the active form of the disease usually appears before the fifth year, a few late cases appear long after that age.

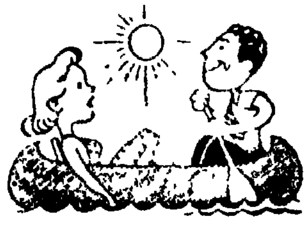
Rickets does not kill True, it



may produce crippling deformities Whether these deformities will disappear depends on the severity of the disease, especially on when it occurred in relation to the process of growth. The milder the disease and the earlier it is controlled, the better the chance that the deformities will completely disappear

Drs Elliott and Park say, "In infants, because of their large measure of incompleted growth and consequent capacity for change, the most marked deformities may disappear. When rickets persists into the third and fourth years, deformities are usually permanent, as indeed they are apt to be when they develop during adolescence. Deformities of the legs and pelvis are more apt to persist than those in other parts of the body because of continued strain of weight bearing."

Of all the permanent results, the



most serious is deformity of the pelvis in women, for it interferes with childbirth. When you think of what it will mean at childbirth, you know that you cannot do too much to give your children strong, healthy bones.

It is generally recognized that normal babies require from four hundred to eight hundred units of vitamin D daily Preventive treatment should be given both breast-fed and artificially-fed infants, and continued at least through early childhood. Vitamin D in excessively high daily dosage is dangerous Apparently God intended us to get most of our supply of vitamin D from sunshine, for it is sparsely scattered through most foods—less perhaps than any other well-known vitamin Although green plants form most of our vitamins, they contain only minute traces of Vitamin D, if any.

In foods of animal origin, such as egg yolk and butter, vitamin D is present in somewhat larger amounts Even these sources are so variable from season to season that they cannot be depended on to protect against rickets. One egg may furnish anywhere from eleven to eighty units of vitamin D; one average square of butter, from four to fifteen units. The safe procedure is to consider ordinary foods practically devoid of vitamin D and supply it from other sources An average diet, which would include one egg, three tablespoonfuls of butter, and a pint of milk daily, would supply possibly as much as 160 units of vitamin D, or about one third of the total requirements. If the butter and

(Continued on p. 28.)

STORY TIME

IT HELPED TO WHISTLE

RUTH WILSON KELSEY

HARI wanted a harmonica.

Once his cousin had let him play her harmonica just for a few minutes. In that little time he had played a few of his favourite songs without any practice or lessons.

He didn't know how he had done it. His cousin had to take lessons to learn to play. Aunty said he played by ear, but she said it wasn't a good idea for anyone else to play his cousin's harmonica. She said something about germs and told her daughter to put the harmonica away. It still made Hari tingle all over just to remember the sweet music he had made

"I know I can play any tune I can whistle or sing," he told his mother. "Please, get me a harmonica right away I want one just like my cousin's"

"We'll see what your father says," Mother told him His father said he must wait until his next birthday. That meant waiting two months. Hari thought the time would never pass. But one month did eventually drag away. And then one day, while Hari was dreaming of harmonicas, his father started talking to him about potatoes. Of all the unromantic things!

"It's just a few days now until spring, son," his father said. "That means it's time to plant potatoes, and I need a good helper like you."

All at once Hari felt tired and sleepy. "Please," he said, "Don't make me plant potatoes. I don't like to. It makes my back hurt, bending so much."

"You like to eat potatoes, don't you?"

"Sure, I do, but . "

"Well, just suppose from now on you sit and watch while the rest of us eat those fluffy, white mashed potatoes, or those hot buttery baked potatoes Mother cooks so well."

Hari saw a twinkle in his father's eyes. He laughed and jumped up. "O. K.," he said, "I'll plant"

When they reached the garden, Hari saw that the ground was all ploughed and ready. His father pointed to two large buckets of cut potatoes waiting to be dropped into the long furrows

"Must I plant *two* buckets of potatoes?" Hari groaned.

"Why not? As you plant just think of all the different ways Mother will fix those potatoes for you to eat next winter." With that Father left him and went to planting a few rows farther away

Hari set to work As he dropped the pieces into the furrows he would say, "Mashed potatoes, creamed potatoes, scalloped potatoes, baked potatoes, boiled potatoes, fried potatoes" He couldn't think of any more ways to fix them so he would start all over again. He soon tired of it. He wished his father would never make another garden. Why couldn't they buy their potatoes at the store anyway? Other people did.



Just then he heard his two friends, Ray and Jim calling They were coming toward the garden with fishing poles over their shoulders.

"Hello, Hari," Ray called "It's a swell day for fishing. Come with us. You look as though you would enjoy a little fun."

Hari looked longingly at the boys and then at his father's back bent above his work. "I can't go," he said. "I have to plant potatoes today."

"Your bucket's nearly empty," Jim said. "We'll wait till you finish."

"There's another bucket." Hari pointed to the far end of the furrow.

Jim whistled. "I hope my dad never starts planting a garden Well, we might as well go without you. See you later." And the two boys strode away.

Hari looked toward his father He was still bending over his work Hari knew he was pretending he had not known the boys were there. As he began again dropping potatoes into the ground he felt that nothing was fair. He couldn't go fishing and he couldn't have a harmonica for another month "I'm never going to eat any more potatoes, no matter how good they look," he grumbled.

He was half done now, for his bucket was empty. As he began working on the second bucket he realized he was also half through waiting for his harmonica. He wondered just how many tunes he could play on it. He played only two on his cousin's. He began to whistle the tunes he knew and to count them. He was surprised how many there were. He began dropping potatoes into the furrows to the rhythm of the tunes he whistled It made time go faster. Before he knew it he had almost reached the bottom of the second bucket

As he reached his hand into the bucket for some of the few remaining potatoes his fingers touched something hard. He brushed the potatoes aside and saw a red box. In wonder he picked it up. It was long and heavy. With a happy shout he opened it There, all shiny and new, was the very kind of harmonica he wanted

Father was looking at him with a big grin on his face. "Well, son," he smiled, "suppose you play a tune for me"

Hari put the harmonica to his lips He ran up and down the scale, then, right there, in the middle of the potato patch he sat down and played. It sounded so beautiful it made him tingle all over, right to the ends of his toes.

HOMEMAKERS' HELPS

CHILD GUIDANCE

MARY NINAJ LARSON

HEREIN we include some excerpts on wise child training from the book *Child Guidance* by E. G. White.

"The parents or teachers who give no attention to the small actions that are not right establish those habits in the youth."—p. 201.

"The carelessness of parents in neglecting to furnish employment to their children has resulted in untold evil, imperiling the lives of many youth and sadly crippling their usefulness. . . . From childhood, boys and girls should be taught to bear heavier and still heavier burdens, intelligently helping in the work of the family firm. Mothers, patiently show your children how to use their hands. Let them understand that their hands are to be used as skilfully as are yours in the household work.

"Each child in the family should have a part of the home burden to bear and should be taught to perform his task faithfully and cheerfully. If the work is portioned out in this way, and the children grow up accustomed to bearing suitable responsibilities, no member of the household will be overburdened, and everything will move off pleasantly and smoothly in the home."--p. 350.

"Mothers, however provoking your children may be in their ignorance, do not give way to impatience. Teach them patiently and lovingly. Be firm with them. . . . You should correct your children in love. Do not let them have their own way until you get angry, and then punish them. Such correction only helps on the evil, instead of remedying it

"To manifest passion toward an erring child is to increase the evil. It arouses the worst passions of the child and leads him to feel that you do not care for him. . . .

"Do not, I beg of you, correct your children in anger. That is the time of all times when you should act with humility and patience and prayer. . . .

"When you are obliged to correct a child, do not raise the voice to a high key. Do not lose your self-control.

"Scolding and fretting never help Instead, they stir up the worst feelings of the human heart. When your children do wrong and are filled with rebellion and you are tempted to speak and act harshly, wait before you correct them. Give them an opportunity to think, and allow your temper to cool."—p. 246.

"Parents, when you feel fretful, you should not commit so great a sin as to poison the whole family with this dangerous irritability At such times set a double watch over yourselves and resolve that none but pleasant, cheerful words shall escape your lips. By thus exercising self-control, you will grow stronger Your nervous system will not be so sensitive. . . . When a parent or teacher becomes impatient and is in danger of speaking unwisely, let him remain silent. There is wonderful power in silence.

"Do not . . . in your discipline of children release them from that which you have required them to do. Do not let your mind become so absorbed in other things as to cause you to grow careless. And do not become wearied in your

ONE-DAY DRESSINGS

PATIENTS can safely have their surgical wounds exposed to the air and discard dressings within twenty-four hours, according to Drs. Louis T. Palumbo, Philip J. Monning, and Dudley E. Wilkinson of the Veterans' Administration Hospital, Des Moines, Iowa.

In the doctors' report in the *Journal of the American Medical Association* they say that uncovered clean surgical wounds apparently heal faster and with less inflammation than similar operation wounds kept covered with sterile dressings up to the eighth day, as is customary.

Patients enjoy looking at their wounds and watching them heal. They do not suffer irritation of the wounds by the bed-covers or sleeping garments.

In their test series the doctors learned that only wounds that were covered with dressings for the usual eight days were prone to break down or open.

The doctors' report covers 211 patients, whose wounds were on the chest and abdomen The operations included removal of appendix, removal of gall-bladder, partial removal of the stomach, and repair of hernia, as well as the operations of the heart, intestines, nerves and veins.

Besides the good healing of the wounds the surgeons found that the new system saves surgical dressing costs and the time of professional personnel in wound care. It eliminates cumbersome dressings and avoids the irritation of adhesive tape.

guardianship because your children forget and do that which you have forbidden them to do.

When you ask your child to do a certain thing, and he answers, 'Yes, I will do it,' and then neglects to fulfil his word, you must not leave the matter thus. You must call your child to account for this neglect. If you pass it by without notice, you educate your child to habits of neglect and unfaithfulness. God has given to every child a stewardship. Children are to obey their parents. They are to help bear the burdens and responsibilities of the home; and when they neglect to do their appointed work, they should be called to account and required to perform it."—p. 218.

"Be so calm, so free from anger, that they will be convinced that you love them, even though you punish them. . . . Disobedience must be punished. Wrongdoing must be corrected. . . . If milder measures prove insufficient, punishment that will bring the child to its senses should in love be administered."—p. 249, 250.

RECIPES

Pea Pulao

One cup rice. Soak in water to cover, 1 medium onion sliced finely, 6 cloves, 2 or 3 pieces cinnamon, 1 cup shelled peas; ½ teaspoonful salt, 2 tablespoonfuls vegetable ghee.

Method. Brown sliced onion in hot fat. Remove the onions and place them on a plate. Drain the rice well, fry it along with the peas till the fat is absorbed. Add the water used for soaking, salt and spices. Stir well. Cover the pan and cook gently until rice and peas are tender. If there is excess moisture when rice is nearly cooked, draw lid off very slightly and put some hot coals on top to dry off the moisture. Before serving stir with a fork to break any lumps. Serve it garnished with fried onions.

Dry Beans

Half pound beans which have been soaked over night, 4 large onions. Slice two finely; 1 piece ginger grind to a paste with 2 onions; salt to taste; 1 teaspoonful amchur; 1½ tablespoonfuls vegetable ghee.

Method: Brown onions, add remaining masala and salt, fry till ready, add beans and ½ cup of water. Cook on gentle fire till tender.

Stuffed Brinjals

Four small brinjals. Wash and slit in half, ¼ teaspoonful turmeric, 1 teaspoonful coriander powder, 1 medium onion, a few fenugreek seed, 1 teaspoonful amchur, a pinch sugar; salt to taste, 4 tablespoonfuls vegetable ghee.

Method. Grind masala to a smooth paste. Stuff the brinjals with ground masala and cook carefully in hot fat on a slow fire. When done on one side carefully turn them over. Remove from fire when tender.

Dum Aloo

Six medium potatoes. Cut in half and scoop out the centres, 1 tablespoonful shelled peas crushed coarsely, salt and lime to taste, vegetable ghee for frying.

Curry:

Four tomatoes cut into fours, 1 medium onion sliced finely; 1 teaspoonful turmeric; salt to taste; 4 drops lime juice, 4 tablespoonfuls vegetable ghee.

Method: Stuff potatoes with the pea mixture. Place the two halves together and bind them together by sticking with fine sticks. Shallow fry them to a light brown in hot fat and drain. Brown sliced onions, add masalas and fry till ready. Add tomatoes, 1½ cups of water and fried potatoes, cook till all are tender and the gravy fairly thick.

Cabbage Rolls

One medium cabbage. Separate the large leaves and shred the tiny ones; 2 medium potatoes chopped finely, 2 medium onions. Slice one finely; 4 cloves garlic, 1 piece ginger. Grind with the other onion, ½ teaspoonful turmeric, ½ teaspoonful saunf, ½ teaspoonful amchur; salt to taste, vegetable ghee for frying.

Method. Brown sliced onions and all masalas, fry till ready, add salt, shredded cabbage and potatoes, cook on gentle heat until tender and dry. Take cabbage leaves, coat with the fried masala and make neat rolls. Tie with thread to avoid opening out. Heat fat *in a shallow pan and fry the* rolls in covered pan to allow steaming. Turn so that leaves darken evenly all over. Take off fire. Serve hot.

Vegetable Cutlets

Peel 5 raw plantains. Steam and mash. Boil and mash ½ lb carrots. 1 tablespoonful lime juice, 1 teaspoonful turmeric; 1 teaspoonful salt, 2 tablespoonfuls coriander leaves. Combine all the above ingredients.

Two large onions chopped; ½ piece ginger, 2 teaspoonfuls powdered cardamom; 2 teaspoonfuls cinnamon, cloves. Fry all in a little vegetable ghee in the order given.

Cook fried ingredients and add to the vegetable mixture. Form into cutlets.

One egg beaten with a spoon of water, 2 tablespoonfuls suji or bread crumbs. Coat cutlets first in egg and then in crumbs. Shallow fry in hot fat.

By courtesy of
Dalda Advisory Service.

RICKETS

(Continued from p. 23.)

egg were poor in this vitamin D, such a diet would furnish only about 40 units instead of 160 (one tenth of the requirement).

If the milk contains as much as 400 units to the quart, the usual amount fed to normal full-term infants will protect the great majority. To be certain of being on the safe side, it would be wise to supplement with some other vitamin D preparation during the first few months. Certainly all premature babies would require more vitamin D than they could obtain from fortified milk alone, at least during the first year.

Cod liver oil has long been a popular source of vitamin D. It is relatively inexpensive and supplies both vitamin A and D. The usual procedure is to begin with a half teaspoonful daily at the third week, gradually increasing the size of the dose during the next three weeks, until the infant is getting the full dose of two teaspoonfuls daily. This is continued through early childhood, preferably through the sixth year. Other potent fish-liver oils are available. They can be given in drops.

The most potent form of vitamin D is viosterol, prepared by the irradiation of ergosterol from plants with ultraviolet light. It is usually put up in vegetable oil such as corn or sesame oil. The protective dose for the average infant is only five drops. Another advantage of this type of vitamin D is that it is tasteless. It can be dropped directly into the mouth or floated on orange juice. The attempt to mix viosterol in oil with the baby's feeding is generally considered unwise, because some of the oil may stick to the sides of the bottle and be lost.

The question is sometimes asked, "Can exposure to sunlight provide adequate protection against rickets?"

The absence of rickets in the tropics is a pretty good answer to that question. But simply to live in an area of sunny climate is not enough. There must be adequate exposure of the skin to the vital ultraviolet rays. This point is well illustrated by Dr. Borsooks' investigations in two Pacific Coast cities in the U. S. A.,—Portland, Oregon, which has less than 2,200 hours of sunshine each year, and San Deigo, which is better off by 38 per cent, with more than 3,000 hours. Five-year-old children from all social classes were studied in both cities. "In Portland 95 per cent, in San Deigo 73 per cent of the children had four or more signs of rickets. We must conclude, then, that with our present mode of life even abundant sunshine as in San Deigo does not furnish adequate protection against rickets."

When sunshine alone is depended on for protection, there is this difficulty: Except on clear days in the summer, little of the vital ultraviolet portion of the sun's rays actually penetrates the dust, fog, and smoke surrounding most of our large cities. The child may be bundled up so completely for protection against the cold that very little skin surface is exposed to the sun. During summer months sunshine will give adequate protection if the exposure time is gradually increased up to several hours a day. Then the child can be scantily clad and kept outdoors a large portion of each day. All young children should be placed outdoors on all suitable occasions and should be allowed to profit by skyshine even when direct sunshine is not available.

Recognizing the value of sunlight, as one of nature's most healing agents, we can benefit from its life-giving powers.

THE MODERN APPROACH TO CEREBRAL PALSY

(Continued from p. 21.)

friends and relatives, or fear people's reactions on the street. Many who had lost faith in God are beginning to believe again."

About five years ago a young Cuban mother had to divorce her husband because he could feel nothing but horrified loathing for their cerebral-palsied baby. She herself admits she felt a sense of shame and a tendency to keep the child isolated, until the man who was to become the little girl's stepfather came into the picture. He took her to his heart and found ways to help her. Today the cheerful, laughing youngster cannot yet walk or sit alone, but her parents are determined that she will enjoy as normal a childhood as possible They are working strenuously to form a Cuban cerebral-palsy association.

Another inspiring story of courage and perseverance comes from Kentucky. At the turn of the century a woman there gave birth to a deformed son, who also was found to be cerebral-palsied Doctors told the mother that his case was hopeless, that he should be put in a home for the feeble-minded, and that she would do well to forget him. She boldly ignored their advice and went on to study orthopædics and osteopathy, deter-

THE MAGIC OF MUSIC

(Continued from p. 3.)

you provide an emotional channel for letting off the pressure of human feelings. Children with nothing to do in their spare time give vent to their emotions by misdeeds, even acts of crime and violence. But there is release in a song or in the intelligent use of an instrument.

On the occasion of a social gathering it brings satisfaction to be able to provide wholesome entertainment. More skilful musicians may serve the church with their talents. You may hold in your hand the key to the human heart.

It will take time to learn to play. Begin now to acquire some musical skill, no matter how old you are. If you can't afford lessons, teach yourself.

Sing, hum, whistle, your way along. Express your feelings jubilantly every day. See how it adds colour and charm and change to your life. Take advantage of the best in music, and its magic will influence your whole life.

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mined to help her son. Today this eighty-year-old mother figures it was well worth it, for her "hopeless case" is a self-sufficient college graduate.

While many localities have facilities for the mentally and physically handicapped, they lack the special rehabilitation centres required for this unique disorder. In 1949, parents of cerebral-palsied children in communities all over the United States began to band together to solve their common problems. Later that same year they went further and formed a national organization—United Cerebral Palsy Associations—which carries on an extensive research and rehabilitation programme. There is an annual fund-raising campaign, with pamphlets, posters, newspapers, magazines, radio, and television, broadcasting a nation-wide appeal. Even so, there are facilities for proper treatment for only four out of every one hundred cerebral-palsy cases.

The Latin American ambassadors and their wives have sponsored two gala balls at the Pan American Union that have netted over $30,000 for United Cerebal Palsy of Washington, D. C. This annual event also is intended to spark interest in the victims and their predicament. United Cerebral Palsy believes the time is not too distant when interested workers throughout the Hemisphere might meet to compare treatment methods and results and to plan further improvements and research in the care of cerebral-palsied children.

In 1950 several Argentine doctors organized the Association for Spastic Children in Buenos Aires (The term "spastic" refers only to one type of cerebral palsy, but this group prefers it because of its simplicity and popular usage.) Besides running an active rehabilitation programme, the association publishes a magazine especially for cerebral-palsied children and has been instrumental in having October 3 designated "Spastic Children's Day." And the Cuyo Rehabilitation Institute for Cripples has recently opened a specially equipped nursery school for mentally normal cerebral-palsied children in Mendoza.

The International Society for the Welfare of Cripples, with headquarters in New York, is also aiding the cerebral-palsy campaign in every way possible. They work directly with affiliated groups in many nations, issue a monthly bulletin in Spanish, English, and French editions, and have several publications on cerebral palsy and related ailments available in these languages

Undeniably meritorious, these undertakings nevertheless represent only a beginning. Yet, despite the size of the task that lies ahead, the wants of the cerebral-palsied are simple To express them, an Argentine pamphlet quotes the well-known prayer: "Give me the serenity to accept what I cannot change, the courage to change what I can, and the wisdom to know the difference."

MEDICINE MAKES SPECTACULAR PROGRESS OVER LAST 50 YEARS

(Continued from p. 5.)

Arteriosclerosis, cancer, and mental illness remain the primary unsolved problems among the chronic diseases.

The most spectacular medical advances of the past half century were the victories over bacterial infections made possible by the development of antibiotics and special chemicals. By means of these new drugs it has become possible to control and cure pneumonia, tuberculosis, meningitis and many other previously fatal diseases.

Cancer, with its increasing incidence all over the world, remains an enigma, although the cure rate for operable cancer is now more than thirty per cent. New chemicals have been developed that kill cancer cells selectively in transplanted animal cancer. Some types of malignancy can be controlled for

long periods with hormones. Human cancer tissue can now be grown outside of the body, and cultures are being shipped from laboratories in the United States to all parts of the world for experimentation by scientists of many nations.

A new mechanical computing machine is now being developed to analyze cancer specimens. Through its use, 10,000 cells can be examined electronically in one and a half seconds. If the density of the nucleus or the consistency of the cell is changed, it is noted by the machine and pathologists can then check the final diagnosis.

Thus, in one and a half seconds a machine can now do the work that would require hours of tedious examination by trained scientists. There are not enough scientists, however, to carry out a large scale cancer detection programme such as is made possible by the new machine.

A good start has been made in the battle against virus diseases, but there is still much to be done. The danger of such diseases is evident when it is realized that in 1918, some 20,000,000 people throughout the world died from influenza.

Virus diseases cause slight or severe illnesses each year for many persons, physicians at the meeting pointed out. Many persons spend ten per cent of their lifetime suffering from infection by one of the more than fifty viruses that affect man. Five of these, however, are now preventable—smallpox, yellow fever, rabies, influenza and poliomyelitis or infantile paralysis.

There is no specific treatment for any of the virus diseases. Antibiotics are ineffective. New and promising therapeutic tools, however, have been developed and are now being used experimentally.

Animal research has shown that c e r t a i n compounds, including ribonucleic acid, prevent multiplication of the virus within the cell and thereby stop the disease. Cautious scientists, therefore, now predict that virus diseases are preventable and in the foreseeable future will be curable.

The Editor Says: "PROVIDE SHELTER FOR WORKERS"

(Continued from p. 5.)

to their responsibility and put forth conscientious efforts to relieve the sufferings of those who work under them, the future will reveal that they have been extremely shortsighted and that they have been the cause behind much of the unrest and strife and blood-shed that is bound to come.

We recall a prophecy which was written in the Bible by the brother of Jesus. It is recorded in the fifth chapter of the book of James. James was writing of that which was to come to pass in the last days of this earth's history. As he looked upon those things which were coming upon the earth, he saw that there were many rich who had such a love of money and of gain that they had no care for their fellow human beings. As he saw those, he saw the others also, in their misery, and he wrote this interesting prophecy: "Come now, you rich, weep and howl for the miseries that are coming upon you. Your riches have rotted and your garments are moth-eaten. Your gold and silver have rusted, and their rust will be evidence against you and will eat your flesh like fire. You have laid up treasure for the last days. Behold, the wages of the labourers who mowed your fields, which you kept back by fraud, cry out; and the cries of the harvesters have reached the ears of the Lord of hosts. You have lived on the earth in luxury and in pleasure; you have fattened your hearts in a day of slaughter. You have condemned; you have killed the righteous man; he does not resist you." James 5 [illegible] R. S. V.

In these words, we have a picture of conditions which exist all too commonly today and conditions which can result in no good. It is only as those who *have* share with those who *have not*, it is only as employers recognize the *humanity* of their employees, that any lasting good can be accomplished in industrial relationships.

As Mr Kazi said, if industrialists can keep their iron and steel in air-conditioned rooms, there is no reason why they should not provide for their workers, because, after all, their workers are human beings even as the industrialists themselves. The workers are partners in production and are equal in the eyes of the law. They are the ones ultimately, who do the work and upon whom the industrialists are dependent for every accomplishment which they achieve. Even the humblest shopkeeper cannot succeed in the work in his shop without the services of those who are his employees or those who serve him.

How important it is that we each one recognize the humanity of each other so that we who are created beings under the observance of an all-seeing and all-knowing God can accomplish our tasks acceptably in His sight and live in such a way that His approval may rest upon us, that our fellow men, from the humblest employee to the highest member of our Board, may rise up and call us "blessed." Let the milk of human kindness be found in our every act, in every decision and in all our plans. Let us stop for a while and imagine ourselves in the other person's situation. If only we could do to others as we would want others to do to us if we were in their situation, what a different world this would be!

GARDENING FOR HEALTH

THOSE FLOWERING BULBS

D. G. Cooper

MOST of the flowering bulbs grown during the summer and rainy season, are easy to cultivate and give a fair amount of success with a minimum amount of effort. Amaryllis, Gladiolus, Haemanthus, Dahlias, Achimenes, Zephyranthus, and a score of other interesting flowering bulbs will probably be planted in almost every garden during this season. Although everyone appreciates the beauty, formation, and size of exhibition blooms, few endeavour to obtain the same amount of success in their own gardens, not because it is impossible to do so, but only because it requires a little more effort and personal care.

By keeping a few basic points in mind, anyone can grow healthy plants, producing large attractive blooms. (1) Always plant the bulbs during the right season. Planting too early, may cause the dormant bulbs to rot in the ground. (2) Select and plant only the healthy bulbs and discard those which have rotted in storage or have been contaminated by fungus diseases. (3) Plant the bulbs at the correct distance and give support to the plant if necessary. (4) Liquid manure given at reasonable intervals is absolutely essential. (5) Removing and storing the bulbs the correct way will ensure even greater success in the following season.

In the plains, most of the common flowering bulbs are planted during April-May. Whereas in the hill stations they are generally planted in December-January.

Achimenes are attractive whether they are planted in pots, hanging baskets, or in the rockery. The tubers should first be started in shallow pans containing sandy soil. In the initial stage water should be given sparingly, and when the plants are about an inch high, they should be transplanted into boxes or shallow pots at a distance of about three inches between each tuber. Achimenes prefer a sheltered location as heavy rain and strong sunshine may retard the growth and sometimes cause the tubers to rot in the soil. When the plants are well established and about five inches high, their tips should be pinched off to promote a bushy growth. Weak liquid manure made from fresh cow-dung, should be given to the plants when the buds appear. A weekly application should suffice. When the blooms are over, the plants should be watered at longer intervals and gradually stopped altogether when the plants die out. The tubers should be stored in the soil, without removing them from the pots. Kept in a cool dry place the tubers will remain dormant till the next season.

Tuberous Begonias present a lovely sight when in bloom. Not only is this specie noted for its beautiful flowers, but also for its foliage which is highly ornamental. Tubers may be planted in pots or hanging baskets. Dormant tubers

GARDEN CALENDAR FOR AUGUST

Plains

Vegetables	No seeds can be sown during this season. Care should be taken of young seedlings transplanted in the ground
Flowers	Dahlias, Gladiolus, Tuberoses, etc, will require staking. Prepare cuttings of Begonias and Geraniums
Fruits	Protect Guava, Custard Apple, etc., from birds

Hills

Vegetables	Sow Peas, Broccoli, Kale, Lettuce, etc
Flowers	Prepare cuttings of Fuchias, Geraniums, etc. Manure Chrysanthemum plants if they are in bud

should be started in a box of moss or fine sand, in the month of May. When the plants are about an inch high the tubers should be transplanted into larger pots containing a soil made up of equal parts of red earth, leaf-mould, sand, and small pieces of charcoal. When the plants are well established, liquid manure prepared from cow-dung may be given weekly. The plants should be sheltered from bright sunlight and strong wind. Watering should be gradually reduced after the blooms are over. In the plains it will not be possible to store the bulbs successfully in sand, and if possible, the tubers may be packed in cellophane or thin plastic bags, and kept in cold storage at a temperature of about fifty degrees.

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PANTOTHENIC ACID: Ques.—"Is pantothenic acid good for baldness?"

Ans.—Pantothenic acid is not of any known value, requiring its use, except that it does help in certain cases of vomiting associated with pregnancy, etc. An ordinary diet provides a great sufficiency. It has no effect on baldness.

?

ACIDITY: Ques.—"What foods contain alkalinity that will remove acidity from the blood?"

Ans.—No foods remove acidity from the blood. There is a lot of misguided literature concerning an imaginary acidosis of the blood, which must be combated at all costs. No matter what is eaten, the ph of the blood, which is an index of its acidity or alkalinity is remarkably constant and does not vary more than an infinitesimally small amount without death resulting. Practically all fruits are alkaline-producing, even though they contain such acids as citric acid with the exception of a few, among which are cranberries and prunes. Grains and flesh foods, eggs, etc., are acid producing, while milk and most vegetables are alkaline producing. An individual should eat an ordinarily well-balanced, regular diet, which will give him the essentials. You should not be concerned too much about acid and alkaline foods.

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LEUCODERMA: Ques.—"About three months ago a slight spot appeared in the middle of my lips. I have tried several remedies but without success. Kindly give me any suggestion to treat this disease."

Ans.—You appear to have leucoderma, which is a harmless disease. It is cured in many cases by rubbing the area with Leudermol, which can be acquired from Smith Stanistreet and Company, Calcutta or from local pharmacists.

?

NEURASTHENIA: Ques:—"I have been suffering with giddiness, pain in the heart and palpitation with fear and general bodily weakness. I am a smoker and take coffee and tea several times a day. The slightest excitement or worry brings on my



THE DOCTOR SAYS

1. This question and answer service is free only to regular subscribers.

2. No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases.

3. All questions must be addressed to The Doctor Says Correspondence personally with the doctor is not available through this service.

4. Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES. Answers cannot be expected under ONE MONTH.

5. Questions sent in on Post Cards will not receive attention.

6. Make questions short and to the point. Type them or write them very clearly.

7. Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published. Address "The Doctor Says," Oriental Watchman and Herald of Health, P. O. Box 35, Poona 1.

symptoms. Kindly prescribe some treatment to cure me?"

Ans.—I would suggest that you refrain from the use of tea, coffee, and tobacco. These drug drinks and tobacco in themselves cause injury to the heart and nervous system resulting in the symptoms of which you complain. You do not tell me if you are over-weight. If so you should reduce. Get regular sleep each night; take some exercise daily in the open air; eat wholesome food at regular hours with nothing between meals and you should have some relief. Do not take a lot of medicines.

?

SPASTIC PARAPLEGIA: Ques.—"What is Spastic Paraplegia, how is it caused, and is there a cure for this?"

Ans.—Spastic Paraplegia is a paralysis of the lower extremities both as to motion and sensation. It is caused by a disease or injury to the spine, loco motor Ataxya, transverse Myelitis, chronic Alcoholism, Anaemia and lesions of the brain. Spastic Paraplegia is a form that is marked by a spasm of the paralysed muscles with increased irritability of the nerve reflexes. This form is usually caused by antero-lateral Sclerosis of the cord.

Whether the complaint is curable depends, of course, upon the cause. Vitamin B_{12}, 100 micrograms is effective in certain cases, if treated early.

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TRAVEL SICKNESS: Ques.—"I suffer from Travel Sickness and I can't help vomiting on short journeys in hilly country or on long journeys in the plains by roads. Is travel sickness an indication of weakness of the heart? What is its treatment?"

Ans.—Travel or motion sickness is not due to weakness of the heart, but to increased sensitivity of certain parts of the nervous system involving the nerves of the eye, ear, and the tenth cranial nerve with various interconnecting nerves. When any motion that involves movement in several planes, the motion of the eighth nerve of the ear, which controls balance becomes over-stimulated. Some of the excess nerve impulse is transferred to the tenth cranial nerve, which may cause vomiting and nausea. The sickness may be generated through the nerves of the eye, which when watching passing scenery becomes over-stimulated. The excess nerve energy spilling over-stimulate the vagus (10th cranial nerve). Treatment consists of wearing properly fitted glasses, of being physically fit and rested before beginning a journey, and of taking certain drugs, which prevent the above-mentioned cause of motion sickness from working. Dramamine is such a drug. It can be purchased at most pharmacies.

?

HEIGHT INCREASE: Ques.—"I want to increase my height. I am fifteen years old. My height is 4′ 8½″. My mother's is 5′ and my father's 5′ 2″. Is there any medicine or some exercise for increasing height?"

Ans.—With your mother and father both being short, the possibility of your being very tall is not great, but by eating an abundance of good, wholesome food including a quart of milk each day, plenty of protein foods as dahls, lentils, etc., and also eating lots of fresh vegetables and vitamin-containing fruits, you may be taller than your parents. You must exercise daily in the open air and sunshine, get at least ten hours' sleep each night going to bed early and observing other rules of healthful living.

THE LAST WORD

GEORGE M. BAROYA

How Doctors Stay Well

Doctors, despite irregular hours, interrupted sleep, meals on the run, and constant tension—both physical and mental—have a higher average life expectancy and are healthier as a group than their patients

Why is this true? Do doctors have special formulas or rules for good health? A recent informal survey of general practitioners revealed that most doctors, many without thinking about it, have of necessity developed health habits that keep them fit despite back-breaking work schedules and constant contact with disease.

Here is a summary of these habits:

1 Maintain proper diet Few doctors are food faddists, but despite irregular hours and calls, most doctors keep careful watch over their diets, eating well-balanced meals at hours as nearly regular as possible

2 Marry This applies to virtually all fields Married men outlive and remain healthier than bachelors. How many single doctors do you know?

3 Get sufficient rest Perhaps because their rest is often interrupted, most doctors know the value of sleep and relaxation Many make up for lost sleep at night by taking a nap before afternoon office hours

4 See a doctor regularly And not only in the mirror or socially. Except for minor ailments that he can treat himself, when the average doctor feels a pain or other symptom he gets an examination and an X-ray If the pain is near the heart he has an electrocardiogram taken.

5 Go fishing This is almost a second profession with doctors, no matter what their financial status. Fishing is part of a doctor's programme for relaxation, so important for a healthy mind and body. And it's a fine way to get away for a while from a ringing telephone.

6 Have a hobby This is in addition to fishing, which is so much a part of a doctor's life it could hardly be called an avocation. Hobbies, to be worth while, should be absorbing and capable of development. They should be started early, and can be active (golfing, sailing) or passive (stamp collecting).

7. Keep a well-stocked medicine chest. Here's a pretty good basic list of items. tourniquet, box of absorbent cotton in sterile roll, roll of pressure (elastic) bandage, bottle of antiseptic (for minor abrasions), list of first-aid hints and poison antidotes, roll each of sterile gauze bandage (one-inch, two-inch, and three-inch), tube of ointment for burns, petroleum jelly (for areas of irritation), calamine lotion (for itching lesions and minor bites), bottle of germicidal disinfectant (such as Lysol), bottle of milk of magnesia, a pair of pointed tweezers, thermometer, adhesive tape (one-half-inch and one-inch), bottle of aspirin tablets, cough medicine, box of sterile gauze pads, bottle of rubbing alcohol, flat wooden tongue depressors and cotton-tipped wooden swabs, medicine droppers (one for each person; do not use same dropper for several medicines), packages of individual bandages with attached gauze pads, hot water bottle (to double as ice pack).

8 Maintain regularity. Drink fruit juices and plenty of water to help avoid constipation in later life.

9 Keep warm. Especially the feet. Many doctors go for years without catching cold, and some of them attribute this record to wearing woollen socks in cold weather.

Cause of Tooth Loss

Contrary to what many people believe, the greatest single cause of tooth loss today is disease of the gums, not of the teeth themselves, says Commander Sam Stone Holmes, of U S Naval Dental School, in Bethesda, Maryland.

Speaking at the American Dental Association Convention in San Francisco, Commander Holmes pointed out that periodontal disease, which involves the layer of tissue covering the root of the tooth and lining the wall of the tooth socket in the jawbone, is sometimes caused by the failure to use a toothbrush in the right way or at the right time

Between the ages of 41 and 45, 97 per cent of the persons studied had some periodontal disease or bone destruction.

In another study, bone loss was found to exist in 85 per cent of the persons between 36 and 45. The Navy dentist dislikes the night and morning toothbrush habit, reminding us that food debris and tartar build up progressively each meal, from the morning brushing until bedtime. He says, "Brush your teeth after every meal."

Brains and Baldness

Bald men can take heart in the high compliment paid them by Dr M Worten Young, professor of anatomy at Howard University. Speaking at a convention of the National Medical Association, Dr Young stated that he had a new theory on baldness and braininess. Hair falls out permanently because a man's brain is growing.

Brain growth causes the skull to expand, stretching the top of his scalp until it shines As the scalp is squeezed, the hair roots are deprived of an adequate supply of blood Hence baldness

It is a long-held theory that baldness is attributable to tension of the scalp muscles This also can diminish the blood to the scalp, causing the hair to die.

Pain-killing Drug Is Faster than Morphine

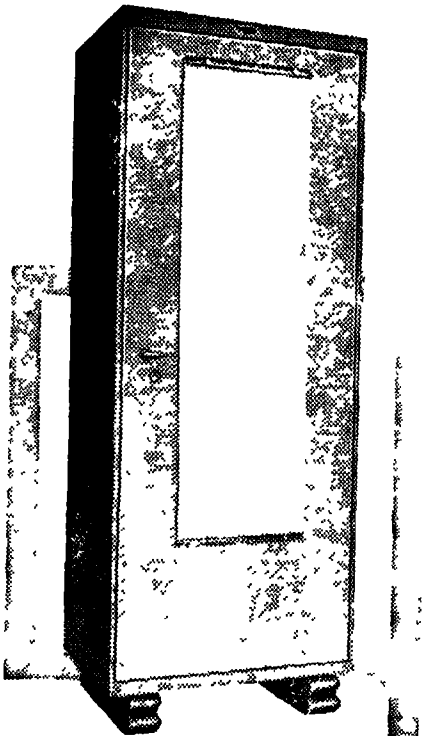
A new pain-killing drug which relieves pain in less time than is required by morphine and has long lasting effects, has been announced by Ciba Pharmaceutical Products Inc, in the United States

In research conducted with laboratory animals, the Summit, New Jersey, firm says, the drug has relieved pain in 10 minutes, as compared with the 45 minutes required by morphine It also was noted that the drug appears to be free from morphine's tendency to slow down breathing, and does not cause loss of consciousness

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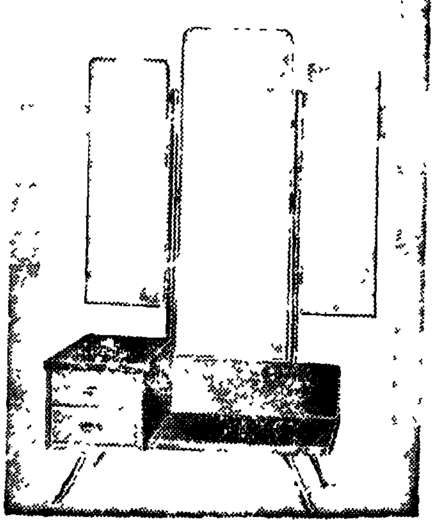
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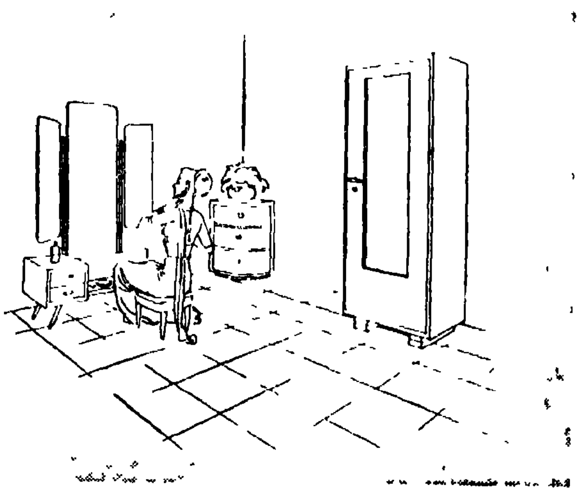


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SA 87 1

Ambala Hospital Offers

LOW-COST HEALTH SERVICES TO POOR WOMEN

(Continued from p 2)

groups All in all it works out to seventy per cent charity"

"Our motive is service, not profit, Dr Paul emphasizes That is why no private practice is allowed to staff doctors Even the consultation fees paid by those who can afford go towards hospital funds"

The Philadelphia Hospital, which operates on an annual budget of Rs 182,000 (income Rs 78,000), gets assistance from people in the United States Fund-raising campaigns are launched in the United States and people give of their nickels, dimes, and dollars, according to their capacity The new building, which cost Rs 4½ lakhs, is almost entirely subsidized by voluntary donations by the people of America (The Punjab Government contributed Rs 50,000)

Help also comes in the form of medicines, multi-vitamin tablets, surgical instruments and blankets under the Indo-U S agreement Recently a complete X-ray set came as a gift from Guatemala A number of rooms have been built from donations by Americans

Recognition of the good work done by this oldest women's hospital in Ambala has come from the Central and State Governments This year the Centre granted Rs 42,000 for purchase of equipment That is a far cry "from the days when I came here first," (twenty-five years ago) recalls Dr Gibbins "Then we used to get Rs 100 from the Ambala municipal committee Today the municipality's annual grant reaches Rs 5,000"

With the passage of years the hospital has enlarged its scope Today its healing hand goes across the countryside It runs two village clinics in near-by Mubarakpur and Sharifgarh Dr Gibbins makes weekly trips to these dispensaries to guide the doctors and nurses on the spot At Sharifgarh dispensary routine medicine costs a patient [illegible] one anna.

The hospital was put to [illegible] test in 1947 when partition br[illegible] 500,000 refugees to Ambala [illegible] stood up to meet the challenge [illegible] won wide acclaim for its work [illegible] her outstanding service Dr Gibbins was awarded the Kaiser-i-Hind gold medal

Fully alive to the necessity of keeping a regular flow of personnel to man the nursing services the Philadelphia Hospital provides teaching and training facilities for forty-five student nurses who undergo a four-year course three years nursing and one year midwifery These nurses ("India needs 70,000 nurses a year," according to Dr Gibbins) serve on many hospitals in the state.

Thus during the six decades of its existence, the Philadelphia Hospital has not only sent out satisfied patients but also well-trained personnel The founder's motto of service above self continues to guide the activities of this institution whose healing touch reaches all the rich and the destitute regardless of status, colour, or caste



WHO's programme for the study of poliomyelitis was developed after an Expert Committee meeting in 1953, and has been designed to give some of the epidemiological information needed for the proper application of vaccination In November 1955, WHO called a further meeting in Stockholm of leading experts from nine countries to review the experience of each in the use of the vaccine A network of WHO regional poliomyelitis laboratories have now been designated and national laboratories are being encouraged to co-operate in a co-ordinated programme

Here, production of the Salk polio vaccine is carried out, under completely sterile conditions The first step is mincing monkey kidney, which later is mixed with a nutrient solution and three types of polio virus The animal tissue aids in rapid multiplication of the polio virus

WHO Photo from U S I S

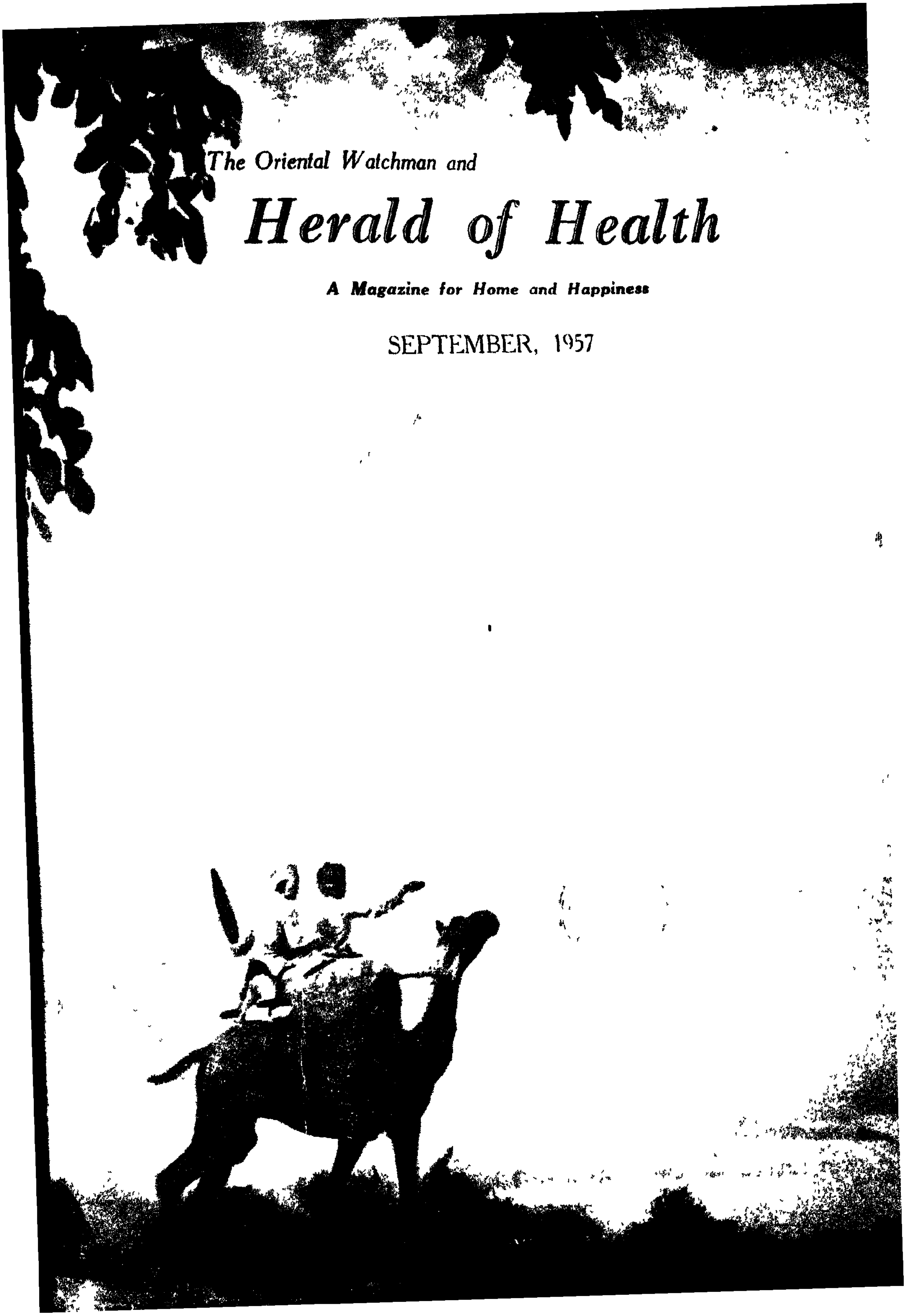
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The Oriental Watchman and

Herald of Health

A Magazine for Home and Happiness

SEPTEMBER, 1957



Young Women Get Training to

Build A Healthier Rural India

H. N. MUKERJIE

A YOUNG woman in typical Orissa village garb peered intently into a microscope. What she saw made her gasp in amazement. She had never believed the woman village level worker who said water contained all sorts of foreign matter. But now she was seeing for herself. Foreign elements wriggled and writhed in the water on the slide.

She must do what the village worker had told her to do. She must boil the water before drinking it or offering it to her seven-month-old baby. In that way, she was told, the disease-carrying germs would be killed.

Hundreds of other village mothers like her have seen the women village level workers come to their villages. Like her, they resented the advent of these strangers into their quiet hamlet introducing new ideas and new ways. The women workers had talked to them about balanced food, home management, cleanliness and other things. In spite of repeated rebuffs, the workers had continued to come, still polite, without rancour.

For in this town is located the Home Science Extension Training Centre where seventeen young women are undergoing training for improving the rural homes of India.

The trainees, gram sevikas, are the counterparts of the men village level workers under the community projects, except that their mission is to improve the lives and homes of village women.

The training centre here is one of a network of some twenty-five home science wings under the Community Development programme, spread over the length and breadth of this sub-continent.

Established in 1955, the centre has already trained fifteen girls who, with those trained at other centres, today are spearheading India's campaign for better and healthier rural homes. The visit to the Bhubaneswar centre made me realize what hard work lies ahead of these young trainees if the [illegible] of rural India is to change.

The establishment of this training centre, as of other centres, is a tribute to three-way co-operation among two governments and one private agency. The cost of buildings and other non-recurring expenses were borne by the Ford Foundation. The U. S. Technical Co-operation Mission in India (TCM) has aided in equipping the centre. The recurring expenses were met by the Ford Foundation in the first year and thereafter

(Continued on p. 36)



USIS

To help village women to learn simple sewing, the trainees are taught [illegible] tailoring. Mrs Niroo Mohapatra, art instructress (with covered head), shows the trainees how to cut a garment for a small child

The Oriental Watchman and

Herald of Health

A Magazine for Home and Happiness

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L. J. LARSON, Editor

JOSEPH C JOHANNES, M D, D N B.
ASSOCIATE EDITOR

J. B OLIVER, M D, D T M
ASSOCIATE EDITOR

Contents

OUR COVER:

We are bound for the Healthland!

Photo Pranlal K Patel

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Minute Meditations

A SONG IN THE NIGHT

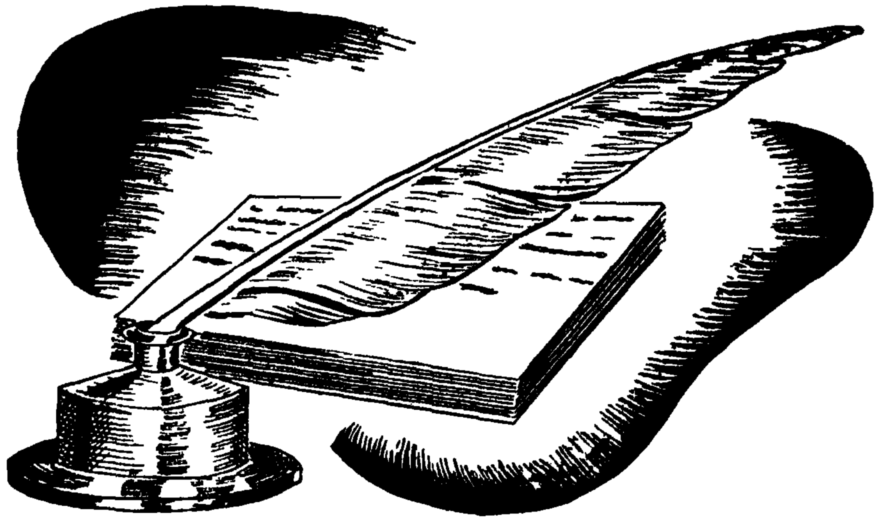
D. A. Delafield

THE quietness of the evening was broken by a sudden clap of thunder overhead. We were seated in the living room and quite unprepared for the change in weather. One deep-toned rumble was followed by another, while lightning flashed and heavy clouds sailed through the mad sky, driven by a thirty-mile wind. Then the clouds opened to pour their heavy load of rain upon the dark earth, and the elements struck up a symphony of sound that lasted for half an hour or more.

The din and confusion of the evening was unpleasant, but one little incident I will never forget. A wood thrush sang for us in the trees nearby, while the thunders pealed and the vivid lightning flashed and crackled above us. The elements held no terror for this happy bird. I can still hear the rich, clear, full, happy notes sounding in the confusion and blessing us with the ministry of peace. In the midst of the worst storm on the darkest night the wood thrush could sing its tuneful song.

We mortals—all of us—may learn to sing in the midst of trial and affliction if we are willing to learn the song of faith. And we may be sure that God will teach us this song even though we must learn it in the night. We can all learn better then. For all of us there are disappointments and heartaches. For some there is the bed of pain or the isolation of the shut-in. For others there are poverty and loneliness. We may be sure that whatever comes our way in the night is the voice of God teaching us life's sweetest melody. To the selfish ear it may sound like a series of discordant notes.

(Continued on p. 25.)



THE EDITOR SAYS

BICYCLING FOR HEALTH

EVERY time I take to the road in my car, I wish there were not so many cyclists. But when I think of cycling and its value to the population of the country, I usually have to take a second thought about things.

I have heard many varied estimates as to the number of cycles that there are in India and in the other countries of Southern Asia, but I do not know of any place or of any office which would be in a position to give me an accurate statement as to the exact number of cycles being used at the present time in Southern Asia. It is estimated that there are approximately 2,50,000 cycles in use in the city of Poona with a population of between five and six lakhs. This would indicate that there is approximately one cycle for every two people in this municipal area. If we worked on that basis throughout Southern Asia, basing our estimate only on the city populations or municipal populations, we would reach a staggering figure as to the number of cycles in the land. Of course, we recognize that cycles are not confined to the cities and municipalities but are very commonly used throughout the country as well.

In Southern Asia, the cycle is, we might say, the poor man's motor car, and the cycle thus becomes the major means of transport for that portion of the populace which must be dependent upon some private means of transport, in order to carry on their daily activities.

We read recently the report of a speech made by Dr. Paul Dudley White, who has become world-famous as a cardiologist and has been the consultant to President Eisenhower.

Dr. White was speaking on the necessity of the people of America taking some step in order to be sure that they have a definite programme toward positive health. He suggested that exercise is one of the best ways of taking this step.

Dr. White is a cyclist and he advocates that cycle paths should be constructed in and around cities as a great answer to the soft push-button life of the city dwellers of today. Interestingly enough, Dr. White urges that these cycling paths be used primarily by the senior citizens as a means of keeping themselves busier both physically and mentally.

The noted heart specialist declared, "Constant hard work never killed or hurt anybody." "Nothing is worse than for our senior citizens to retire and then drowse day in and day out." He says that the most active retired persons are those who live the longest. If we are to improve the world's health a definite, positive programme of health protection must be developed to augment medical and surgical research.

"These things must go hand in hand if we are to conquer heart disease, cancer, arthritis and other major diseases," says Dr. White. Major factors in such a programme would be diet, and the omission of alcohol and tobacco, he stated. He believes that diet probably is of first importance to all of us.

We will have "a great resurgence toward conquering disease during the next decade," Dr. White predicted. He asks patience, moral and financial support of various research programmes.

In stressing the importance of exercise, Dr. White pointed out that in America there are approximately 22 million bicycles wheeling over the land, but he stresses that these are being ridden mostly by children between four and fifteen years of age and that by the time those youngsters are sixteen, in the nature of things in America, they have their eyes on the family car. We recognize that this condition does not hold true in Southern Asia or in most other countries of the world. In Europe, for example, bicycles are still the common man's—and woman's—transportation. There is an increasing tendency in America, for example, in colleges and cities to organize cycling clubs, and in the university city, Ann Arbor, where the University of Michigan is located, and where cars are prohibited among students, about 15,000 bicycles are used in that one city

alone Many of these cycles are being used by older students and professors. Some of the other colleges, notably Smith, has for generations been conspicuous because of its insistence upon the use of the bicycle. It is because of the devotion of college girls all over America to the cycling tradition that the universally worn garment is called a "pedal pusher."

Obviously, we are not writing to an American audience, but we are presenting a situation that exists there as the basis for Dr White's discussion on cycling and the basis for his recommendations. He suggests, for instance, that the mayors of Chicago, Baltimore, San Francisco and other such cities should construct paved bicycling paths for their citizens, such as are provided in London and in other European cities at the present time. Your editor is not so ancient, but he can recall that there were plenty of cycle paths in American towns and villages some years ago, even as there still are in some of our larger cities in Southern Asia, old bridle paths that could be very easily converted to cycle paths It would be a shame to have these old bridle paths absorbed into the congestion of modern city life. They should be salvaged in some way and made useful for recreational pursuits by the city-dwellers whom we are forced to look upon as unfortunate people.

Dr White points out that despite the "scorchers," heart-disease was less frequent some time back than it is now and he strongly advocates the return to a cycling hobby as a method of actually preventing the early on-set of circulatory and heart difficulties.

We would, of course, not recommend that any oldster who has retired or who has done no active work for many years or even for just a few years, or who is particularly heavy, should go and purchase a bicycle and immediately go out for a five- of ten-mile ride! That would be a very ridiculous thing to do However, we would with Dr White, recommend to our readers who are a bit on the inactive side and who are lacking in open-air pursuits, that they obtain for themselves a cycle and ride it just a little bit to begin with to tone up the muscles of the arms, the legs, the back, the abdomen and to give a little more vigour to the lungs and to strengthen the circulatory system Then gradually and intelligently they should increase the amount of effort that is spent on this activity so that they will in time build up their physique

(Continued on p 27)

OBITUARY

Word was received too late for our August number telling of the death of Dr. H. C. Menkel on June 30 after a brief illness. Many of our older readers will be saddened by this news and will recognize with us that India has lost one of its great friends.

Volume 1, No. 1, of *The Herald of Health* dated 1910 bears the name "Dr. H. C. Menkel, Editor." This magazine has lost one of its guiding spirits in the passing of Dr. Menkel. Not only was he the founding editor of this magazine, but he also wrote widely on the subject of health as it applies to Southern Asia, and we have published many of his books throughout the years, some of which are still in print.

Not only was Dr. Menkel outstanding in his work as an editor and writer, but he also did excellent work in connection with his profession in Delhi, in Mussoorie and later at the Simla Sanitarium. Many of the older ones in Delhi and Simla will remember him and his untiring, unselfish service for humanity.

In addition to his medical service, Dr. Menkel was also active in the work of the Seventh-day Adventist Church as an administrator.

About thirteen years ago, Dr. Menkel left Southern Asia and while his name is still remembered by many, he did not find it possible to return to this land which he loved so much. He is, however, remembered as a man of high principle and of deep devotion to God and His cause. He used every avenue to bring the light of truth as he understood it to those among whom he worked.

After he retired from service in India, he continued to carry a full and heavy programme in his line of service in his home-land. He utilized every possible opportunity to bring about a better understanding of India and its problems by those with whom he associated.

With Dr. Menkel's other friends and acquaintances and those who only knew him through his written words, we would send our sympathies to his loved ones and would re-dedicate ourselves to the service of health education and better living to which he devoted so much of his life in Southern Asia.—Ed.

THE STUDENTS' GUIDE

THE PRELIMINARY EQUIPMENT OF A COLLEGE STUDENT HERE AND ABROAD

A YOUNG man in Tanjore has recently asked, "Please write a series of letters on 'The Preliminary Equipment of a College Student'" He continues by saying that he feels that though he has finished high school, he has some weak points that should be corrected and that there are things that he ought to know that would help him as he goes on with his work in College. He explains that he has read about such things as patriotism and punctuality, and that he reads regularly the *Reader's Digest* and other magazines. He says that as he reads articles dealing with adventure and travel and social service, a "spirit" is kindled within him But he seems unable to persevere and continue in that "spirit" for some time. In other words, the enthusiasm that he derives from his reading is temporary. It doesn't last. He says that he would like to know the reason for this and would like to have us suggest a method which can help him to retain those emotions and to cause those feelings to stick with him, and some method that would raise him to an independent and liberal manhood.

This young man's question covers a lot of territory. But, we have decided that we would devote our "Students' Guide" this month to a reply to his request, inasmuch as we feel that his request is typical of the needs of many college students, whether they realize it or not.

So, now let us consider some of the backgrounds required by a student if he would do successful college work and achieve that degree of independence and self-respect that he so desires as a result of his college work.

The young man who wrote this request states that he has been doing a good deal of reading. That is good. Any young person who desires to go on for higher education beyond high school, should do much reading Under the present circumstances it would be well for such a student to do a good deal of reading in the English language to build up a wide familiarity with the terminologies of the various subjects which he must study We give this advice guardedly, but primarily because of the fact that while endeavours are being made to provide good textbooks in the national languages, it is recognized by educators all over the country that collegiate education must, for some time, continue to be dependent upon textbooks in the English language. Therefore a college student must have a wide background in reading in the English language, so that he will be able to understand the materials that are presented to him in his texts and in his supplementary reading.

Any student entering college should know that the different courses which he would take in college have different specific vocabularies For instance, a student who is taking work in the field of education would have a specific educational vocabulary. A person working in the field of biological science, would have a biological-science vocabulary, while someone working in physical science would need to be aware of the physical-science vocabulary. A person working in the political sciences or social sciences would need to be aware of the particular terminologies that would be used in his field of chosen study. So, they should read in fields which are related to their field of particular interest in their collegiate study as a means of preparing themselves adequately for the work which they will be required to do in college.

Health is, of course, one of the most necessary pieces of equipment that a college student can possess. Without health no other qualifications are really going to enable the student to achieve the degree of success that he so desires Therefore, any one who plans to go on for further study should do what he can to be sure that he has good health and to maintain what health he has. This would mean, of course, that he should give attention to diet, to exercise, to rest, and to his habits of living, so that whatever he does will have an influence for good upon his general physical being. There is a very definite relationship between the condition of the body and the state of the mind A healthy body contributes to greater mental ability

The student who would go on for college work should develop a technique of rapid note-taking, so that he can keep track of the important statements made by his instructor in the course, or by the lecturers and keep these notes in an easily understandable and usable form. There is really very little value in taking copious notes unless those notes are recorded in such a form that they are readable when the time comes for revision. But of greater importance than the ability to take notes, is the ability to remember what one reads and what one hears. Too many people have received little, if anything, from their college education, because the education is contained entirely in their note books.

There is the story of the young man who had been sent away from his home to attend college in a dis-

tant city. His father was very proud of the accomplishments of his son. After four years, when the young man returned home having completed his work, the father met him at the station and was very much surprised when his son told him that he felt it would be necessary for him to return to college. The father wanted to know why The young man said, "Well, you see father, I kept very careful notes of everything that I studied. I took notes from my textbooks. I took notes from my professors' lectures, and all of those things. I kept those note books in one of my boxes which I put in the brake van. While we were coming home, there was an accident. The brake van was smashed and something set fire to the contents. Among other things, my box with the notebooks was burned up. Now I will have to go back to college to get those notes again!"

This little story very simply illustrates the point that the college education should be in the person's head rather than in his notebook. We would strongly advise that the student who would plan to do college work should learn to remember rather than to learn to depend upon notebooks which he may use for special study the last few hours before the examination. Actually the notebooks are not worth very much unless the student has the knowledge in his brain.

The student should also, of course, not only read much but he should endeavour to get as much practice as he possibly can in expressing his thoughts and ideas in specific terms. He should practice writing out various matters which might be similar to the sort of thing he would be required to do in connection with his examinations Any examiner is bound to be impressed with a paper which is prepared in a thoughtful, logical, systematic manner in which the words of the terminology of that particular field are correctly used and accurately spelled

The student who would go on to college should remember that in his equipment he should include a good knowledge of spelling and an above-average ability in the use of the language in which he will be writing his examinations and expressing himself in the course of his studies

The young person who would succeed in college also should, if possible, know how to study *before* he goes to college As we have implied above, there is too great a dependence upon crutches such as notes or the study helps that may be purchased in a book shop, and things of that nature, rather than upon one's individual abilities

We have often described college education as being simply a four-year course in learning where to find the information that you need when you need it This may be a bit of an over-simplification, but young people who really get the most out of their college education are those who have learned how to study their particular subject adequately If a student would really be adequately equipped for college study, he should know how to study That implies that he must know how to pick out the most important facts from those things which he reads

Usually in each paragraph, there is one sentence which more or less sums up the entire content or thought of the paragraph This sentence is called the "topic sentence" and if a student can go down through his required reading and pick out his "topic sentences," paragraph by paragraph, he will find that he has a very fine summary of the content of the chapter and in just a few sentences he will be able to compile a summary of the content of the material he has been reading It is also well to write a short summary of each chapter that you study, so that you will know that you have an adequate command of the content of the material you have been reading.

We recognize that there are a great many other things that might be listed so far as items of equipment necessary for successful college study are concerned, but we feel that space in this issue limits us to those which have been referred to above. We feel that the suggestions we have made will be of value to every student who will conscientiously endeavour to make the right use of them.

A BOOK REVIEW

SUNSHINE—A MONTHLY MAGAZINE, EDITED BY DR G S KRISHNAYYA AND PUBLISHED BY THE CHILDRENS' SUNSHINE CONCERNS, 44 SASSOON ROAD POONA 1 YEARLY SUBSCRIPTION Rs 5

One of the defects long felt in India is the absence of educative and entertaining reading matter for adolescents At this impressionable age, they must develop service-mindedness, national unity, an international outlook and a taste for good literature They must build up general knowledge and acquire a many-sided interest in the present scientific world in which they live

It was to meet this need that the experienced educationalist, Dr G S Krishnayya, started SUNSHINE *(Suryajyoti)* three years ago for the benefit of boys and girls 13-17 years of age With his vast experience in India and abroad, he is able to present an up-to-date youth magazine with a world-wide view Each issue contains a balanced, graded, and interesting amount of reading matter Judging from his editorials, his purpose is not only to instruct but also to inspire our future citizens

SUNSHINE has been strongly recommended by Directors of education and Ministers of education.

TRAIN UP A CHILD

LOUISE M. BROWN, R.N.

Now is the only time you will have to train your child for a worth-while life.

THE most *immediate, influential, and conditioning environment* of young human beings is family life and its relationships. Through the family the child enters the world and first finds out what it is like. The family embraces the child with a degree of closeness that no other social group will ever approach It holds him in almost exclusive possession during his formative years, when the deep basic traits of personality are moulded for better or for worse

It is unfortunate that the most notable omission from the list of general educational values is religion When the *New England Primer* made its appearance in Boston in 1690, it was edited for Puritan use, and heavily weighted with religion. The early editions included morning and evening prayers for children, moral lessons, grace at mealtime, and the Lord's Prayer. One of the features of the book was the Westminster Catechism, which was called "spiritual milk for American babies" The *New England Primer* is said to have taught millions to read and not one to sin.

Religion has been observed to be a universal need of human nature, but religious life in the home is taken far less seriously now than formerly Nominal church membership remains about the same, but the church is no longer the centre of the community, as it once was Prayer and religious ceremonies have all but disappeared from the home

The greatly decreased influence of the church on daily life creates a need for compensating factors. A new type of education that aims at a satisfactory philosophy is indicated. The groundwork of character development is laid in the home.

In the home the child first comes to know other human beings intimately. His outlook on life, his character, and his social attitudes are determined by family influences. Here the social nature and ideals of the individual are moulded for life.

For better homes we must have better parents. The early years are the most formative. It has been stated that a child who receives Christian training for the first seven years will remain a moral and upright citizen for the rest of his life. "Train up a child in the way he should go: and when he is old, he will not depart from it."

Children who are brought up under the wise and loving guidance of Christian parents will have much less desire to wander in search of pleasure and companionship. Evil will not attract them. The spirit that prevails in the home will mould their characters They will form principles and habits that will be a strong defence against temptation when they leave the home and take their place in the world.

Abraham Lincoln is one of the many outstanding examples of the result of early training in the home He has said, "All that I am or hope to be I owe to my angel mother."

Christ, our example, studied the Scriptures. As a child He was taught daily at His mother's knee from the scrolls of the prophets His mental and spiritual power is a testimony to the value of the Bible as a means of education

In giving His Word, God did not overlook the children. In the simple Bible stories the great principles of the law of God may be made plain Parents and teachers may begin early to fulfil the Lord's injunction "Thou shalt teach them diligently" Object lessons, blackboards, maps, and pictures are all helpful in explaining lessons and fixing them in the children's memory. Even in the nursery age, God may be interpreted to children, for they may see reflected in the parent the goodness they will later identify with God

Influence rather than instruction may be offered in the very early years. Contact with the beautiful things of nature will help widen the child's happy experiences. He may be taught kindness, helpfulness, beauty, fairness, courage, and wisdom by means of examples in nature. God may be made meaningful and helpful to him as the years pass. A child's religion depends a great deal on the parents' attitude to each other

Religion is real to children It was found that about a fifth of a



Pranlal K. Patel

A child's outlook on life, his character, and his social attitudes are determined by family influences.

tested group of children thought of religion only as a preparation for life after death. Others in the group thought of it largely as a conformity to familiar forms of conduct prevailing in the home, the church, and the community To others it meant saying their prayers and attending church regularly with their parents.

The unhappy family situation existing in broken homes, where children are tossed from one parent to another may cause grave maladjustment when the child reaches adulthood. The emotional symptoms exhibited are apparently the result of frustrations and conflicts experienced in home situations

Noted psychologists have come to the conclusion that religion is the most effective means and basis for building an integrated personality The heart of religion is in the home The responsibility lies heaviest on the parents. One of the most potent influences in a child's life is his parents' attitude toward each other, and toward good and evil You cannot push your child one way as you go another.

As they penetrate more deeply into the mysteries of human personality, the greatest exponents of the importance of religion are becoming urgently aware of the need of a religiously inclined life within every person. A person needs religion not only for the "soul's health" but also for true maturity and integration of personality, without which he cannot reach the heights of usefulness or the heights of happiness of which he is capable

Many doctors find that their patients are suffering from lack of religious faith. When faith is restored, it greatly helps them regain their mental health

The atmosphere in the home is a help or a hindrance to the child's religious growth Early experiences should be happy ones, so that the name of God is associated with joyful things. In God's original plan for man on the earth, the home was the centre of all life's activities. One of the highest functions of the Christian church is to promote the establishment of ideal homes, to educate parents and children to their privileges and responsibilities in the home and elsewhere

The Christian's conception of the home is a place where parents and children are bound together by love and respect, where God is worshipped and obeyed, where the Bible is read and studied, and where prayer is heard

Parents must realize their enormous responsibilities as progenitors of human life, as mouthpieces for God so that their children will honour and obey Him. They must daily teach the great lessons of life cleanliness of body and soul, industry, thrift, system courtesy, joy, courage, and service

The ideal home is a place where the children are given a lofty vision of their duty in working for the salvation of their fellowmen, and where all look to Jesus as the ideal for human life.

MOSQUITO

versus

GUARD DOG

A Remarkable Story Of Veterinary Research In Malaya

R. REAY

Britain's Royal Army Service Corps

IN JUNE, 1955, members of the Veterinary Staff of the Army Guard Dog Unit in Singapore noticed that something was seriously amiss with their charges. Dogs which had previously undergone long periods of patrolling without fatigue now showed signs of lassitude after quite short periods of exercise. Post mortems carried out on dogs which died suddenly during this period showed "heartworm" to be the cause of death. Blood tests showed that more than half the dogs were infected.

The large number of mosquitoes in the area gave rise to the belief that those insects were in some way responsible for the spread of the disease. The Hygiene and Malaria Control Unit was called in to investigate and if possible discover the chain of infection.

It was already known that the worms, some three to four inches long, lived in the heart cavity and that the larvæ they produced required a host, or carrier, during their incubation period before entering the bloodstream of another dog and thus spreading the infection No available drug was capable of killing the adult worm, so there remained two methods of beating the disease—killing the larvæ in the bloodstream or destroying the carrier in which they incubated.

The first method was tackled by the veterinary experts who treated the infected dogs with various drugs known to be lethal to larvæ. Although there was a slight improvement in most of the dogs only a very small percentage showed a negative larvæ count by the end of the course Meanwhile, the Hygiene section, under the direction of its entomologist officer, was trying to discover the other link in the infection chain, the carrier.

Two of Britain's National Servicemen spent several nights in the kennels under a mosquito net, open at one end. As a mosquito alighted on one of them, the other would scoop it deftly into a test tube which was then labelled with the time and place of the "capture."

Cunning Culprit

Meanwhile research had uncovered the strange fact that the larvæ came to the peripheral or skin level blood vessels only between eight and eleven at night. From the log of the mosquito trapping a statistical table was drawn up. It showed that one particular mosquito, *Mansonia Uniformis,* was many times more prevalent in the area during the period in which larvæ in the dogs were in the skin area. Further experiments proved *Mansonia* to be the culprit.

But the battle was not yet won. In the case of practically every other mosquito, elimination would have been a simple matter of spreading oil on the nearby hyacinth ponds in which they bred, thus choking the young mosquitoes that breathe through the surface of the water. *Mansonia,* however, is much more cunning. The adult of this species lays its eggs underneath the leaves of water hyacinth plants When hatched the larvæ drop from the leaves, sink beneath the surface, attach themselves to the stalk of the plant and breathe through it until they reach the adult stage.

Destruction of the mosquitoes was finally achieved by the use of a soluble insecticide in pellet form by a commercial organisation When dropped into the hyacinth ponds it dissolves slowly and remains effective for six months A commercial compound in the form of a fog spray was also used in the kennels to rid the area of the adult *Mansonia.*

About thirty new dogs were sent out from England during the first few months of 1956 to replace the infected animals. As "heartworm" cannot be detected until eight months after initial infection, results could not be known until December. Tests have now proved that not one single dog of these thirty reinforcements has "heartworm."

SKIN DISORDERS

	Cause	Location	Symptoms
IMPETIGO	Infection from staphylococcus or streptococcus or both Spread by soiled fingernails, towels and anything infected child has handled. Can start from infected insect bite or neglected break in skin.	On face, scalp and hands Often spreads to legs, feet, and fore-arms	Starts as small blisters which soon increase to perhaps one-half an inch Blisters discharge fluid; this later dries and forms crust.
RINGWORM	May be produced by many types of fungi. It is spread by contact with the sores, discharges from the sores, or clothing in contact with the sores.	Scalp and general body surfaces Ringworm of feet (athlete's foot) very frequent Face, neck, and hands most often attacked.	On scalp, scaly gray spots which are partly denuded of hair. On body spots are small, pink, and slightly raised They enlarge to ring-shaped areas with pale centres and red, raised edges Itching, peeling and some cracking on feet
ACNE	During adolescence the pilosebaceous or fat glands are activated and excreting ducts may not increase fast enough to take care of the increased production of sebum. The result is the development of acne	Most frequent on face Also common on neck, back, and chest	Blackheads, whiteheads oily skin, distended pores, pimples, scars of healed pimples—singly or all together, are the signs of acne
SCABIES	Infestation of skin by a parasite. Condition contracted by direct contact with infected person or articles in contact with infected person.	Usually on sides of fingers, elbows, armpits, neck, inner sides of thighs, ankles, feet Face rarely affected, except occasionally that of nursing infant	Parasite burrows into skin, producing irregular elevated lines of sores Itching is severe. Scratching may produce inflammation of skin and resulting blisters and pustules.
HIVES	Presumably allergic—due to sensitivity. Common foods producing attacks are: shellfish, pork, cheese, butter, eggs, strawberries, mushrooms and tomatoes. Also certain drugs serum injections, and occasionally an inhalant.	All parts of body may be affected. Most common on legs, lower part of trunk, buttocks and over surface of thighs	Swellings called weals suddenly develop They range in size from a dot to a coin, or larger, and can be white or pink in colour and may itch, sting or burn Weals usually last only a short time

LOSE WEIGHT

ROBERT H. RUBY, M.D.

Your doctor wants you to stay within normal weight for your health's sake.

AT ONE of the yearly American Medical Association conventions entire programmes and exhibits dealt with the alarming problem of obesity. Insurance companies have prepared booklets showing statistically that this disease is taking an increasing death toll.

The doctor is facing more and more the problem of the overweight patient. Obesity is a menace. Overweight people are poor anæsthetic and surgical risks. In other illnesses they are difficult to treat and heal.

Obesity is one disease the person himself can control, in most cases. It differs from heart disease and cancer, where the physician's services are needed constantly. More than ninety per cent of the obese can lose their weight by self determination, will power, concerted effort, and common sense in dietary habits. No doctor can do any of these services for his patient. We cannot escape the fact that most of the obese are overweight because they eat more food than the body needs. Unless these people overcome the vicious habit of overeating, they are hastening their demise.

You can lose weight. Here are nine ways to cure your disease and make life longer and happier.

1. Eat Less.

The average person loves to eat, and he eats indiscriminately. A simple rule to follow is to take small helpings, refuse seconds, and eat no between-meal snacks.

The craving for food above the amount necessary to run the body is habit. Although a rigid stand against overeating is difficult at first, most people can control, and finally do away with, the hunger pangs.

2. Exclude Fatty Foods.

Make it a rule to eliminate ghee, mayonnaise, sauce, and other such food amplifiers from your plate.

Do not eat fried foods. Prepare foods by broiling, boiling, and roasting.

3. Keep Butterfat to a Minimum.

Drink skim milk or butter milk. Use skim milk in cooking. Use only small amounts of butter or reinforced margarine as a spread or in cooking.

Use cottage cheese and other milk products from which the fat has been removed, in place of other cheeses.

4. Eat No Desserts.

Sweets are the greatest weight adders and the hardest for the dessert fiend to do without. Desserts should be omitted by the obese except for an occasional dinner out, when they do not want to offend their hostess.

For the most part, eat fruit for dessert, with sherbets, sponge cake and other non-fat delicacies occasionally. Nuts, which are exceptionally oily, and sweets should be excluded.

5. Drink No Alcoholic Beverages.

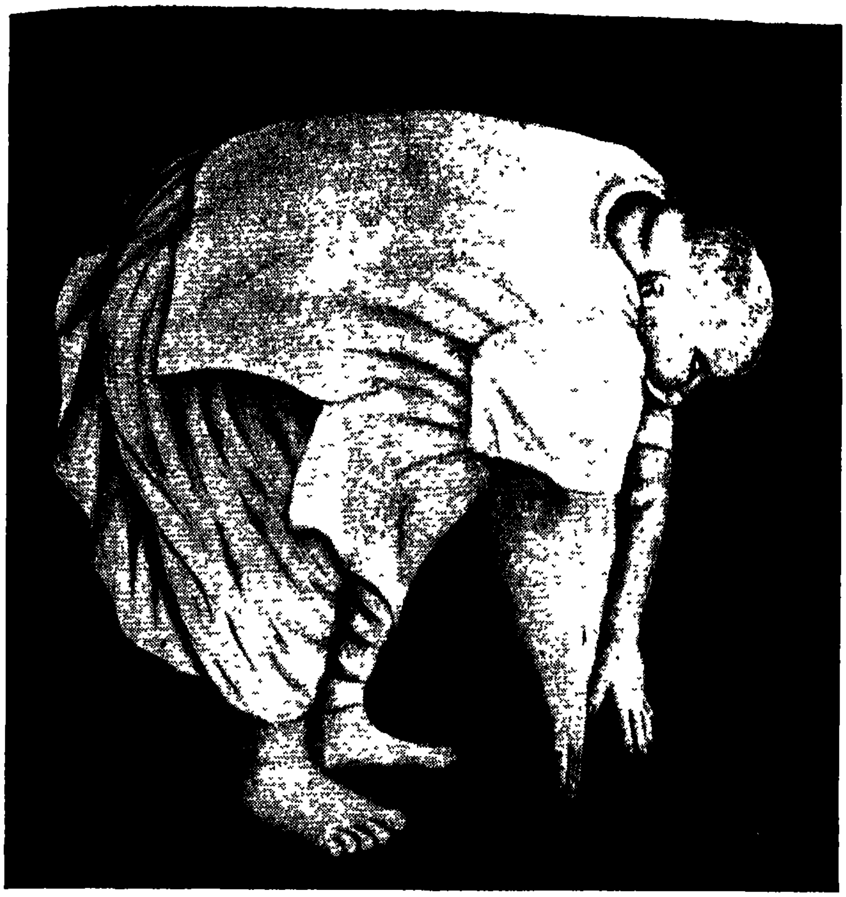
All alcoholic drinks are enemies of the obese. If you must have a glass in your hand, fill it with water or unsweetened fruit juice.

weight. Find your body needs for maintenance only.

8. Do Not Subscribe to Reducing Wonders.

A person who attempts to lose weight by using the easy, quick commercial reducing power is in danger of doing himself bodily harm. He is given drugs that cut out the normal hunger pangs. With normal hunger pangs missing, many people reduce their mealtimes to cigarettes and coffee. They had better not reduce than to use this means, for by such methods they shorten their trip to the grave. Some reducing methods do nothing but supply vitamins and recommend a reduced food intake, not necessarily well-balanced at that. Commercial reducing methods may supply harmful substitutes that are not cures. Anyone with a will can lose weight on his own by following the rules, provided he has the initiative.

Do not take thyroid tablets or other pills a friend may be using. Use thyroid only under a doctor's supervision and at his suggestion.



Exercising is a poor way to lose weight.

6. Eat a Well-balanced Diet.

There is no substitute for a diet including proper protein, low carbohydrate, and minimum fat. Vitamin and mineral requirements must be supplied through plenty of leafy salads, vegetables, and fruits. Protein builds and replaces worn-out body tissues. Carbohydrates are needed for energy.

A certain proportion of all the classes of food is needed to supply the body with all of its requirements. A person in good health, taking a well-balanced diet, does not ordinarily need vitamin supplements.

Do not try publicized stunts, such as excluding salt from your diet, to lose weight. You will do well to avoid excess salt, but your body does need a little.

7. Do Not Over-exercise.

Exercising is a poor way to lose weight. Excess physical energy overstimulates the appetite. The amount of work required to lose one pound of weight increases the desire for a food intake that will usually add more than one pound. Such exercise, to be effective, would have to be maintained day in and day out.

In older persons, over-exercise is not desired in the presence of progressive body changes, such as hardening of the arteries and allied conditions. Undue effort may cause undue strain on the heart. Normal activity and moderate exercise, with less food properly proportioned, is the answer.

Individual bodies vary. Metabolic rates are different. Some people can eat moderately without gaining

9. See Your Doctor.

Do not exclude a yearly visit to your private physician. Some obese people may have associated conditions that should be corrected or watched. It is possible that a weight reduction on a diet may be coincidental to some serious hidden disease that helps bring about the loss of weight. Overweight may be the result of some underlying disease that must be corrected before results can be attained. But the chances of your obesity requiring methods other than dieting are few.

Ask your doctor for a listing of what constitutes a well-balanced diet if you do not feel qualified to plan your own foods. Your doctor can also give you a chart to indicate your ideal weight according to height and age.

LUCY Corrigan is proud that her life is proof that the blind can lead the blind. Totally sightless, she has spent her adult years as teacher, friend, and inspiration to others who are similarly afflicted.

"I believe I can work successfully with blind people because they feel secure in accepting the help of one of their own," says this energetic, independent woman The only concession she makes to her handicap is to travel with a companion. At home she is completely self-sufficient, living alone and doing her own cooking and housekeeping

To prepare for her career of service, Miss Corrigan took a special course at Columbia University in methods of teaching the blind She started putting her training into practice as a staff member of the American Foundation for the Blind and later at the Bureau of Social Services and Children's Aid Society

Today, as an employee of the Brooklyn Exchange for the Blind, she divides her time between helping blind persons who are homebound and those who can participate in group programmes at centres maintained for the sightless.

An average day for Miss Corrigan may include three or four home visits to show shut-ins the technique of keeping house, to instruct them in Braille, or to teach them a simple craft as a hobby or a means of livelihood

Her shedule includes a visit to Anthonian Hall, a non-sectarian residence for blind women run by the Board of Catholic Women There she conducts hobby classes to teach the forty residents how to weave, make rag dolls and cook by touch She also conducts classes in Braille reading and writing, and the instruction she gives in typing has brought both pleasure and income to her students. Her lively presence also adds to the social life, because she plays the piano and leads in dancing and other group activities.

To round out her day, Miss Corrigan hurries on to the Brooklyn Exchange for the Blind, a centre where adults are given instruction and employment in useful trades. In addition to helping with that programme, this indefatigable teacher conducts an educational and recreational programme for children. She guides small fingers as they master the arts of Braille reading and touch typing, introduces them to arts and crafts plays the piano for their songfest and organizes games to entertain them and give the self-confidence needed to help them overcome their handicap.



Lucy Corrigan, totally sightless, shows a child at the Brooklyn Exchange for the Blind how to write in Braille

Blind Woman Lead The Blind

Courtesy U.S.I.S.

Does the Sun Rule the Weather?

Courtesy U.S.I.S.

MANY scientists believe that there is a direct link between the sun and the weather on our earth. If this link is ever found, it may bring a new era of accurate long-range weather forecasting.

One of the major aims of scientists during the forthcoming International Geophysical Year 1957-58 will be to study changing conditions on the sun and endeavour to discover how they influence earthly weather. Together with its light and heat, the sun spews toward the earth great jets of atomic particles, with bursts of radio waves, ultra-violet and cosmic rays thrown in for good measure. The causes of this mighty bombardment and its actual effects in the earth's upper atmosphere are close to a total mystery.

But physicists, weathermen, meteorologists and radio engineers, among others, are anxious to know more about them in order to improve their forecasting of both meteorological and magnetic storms.

Probably the most important single aspect of the International Geophysical year, consequently, will be detailed and continuous observation of the sun's fiery atmosphere, its fluctuating chemistry, and its violent disturbances, such as sunspots and solar flares. This is one reason why the IGY—the 18-month period from July 1, 1957 to December 31, 1958—will take place during the peak of the 11-year sunspot cycle.

The sun watchers will give advance warning of the growth of any unusual solar activity. By a special world-wide radio network, they will advise hundreds of geophysical observation posts to "World Alert Periods," during which scientists will be particularly vigilant in watching for auroras, radio fade-outs, and major or minor meteorological changes.

Far above them, research rockets

(Continued on p. 25.)



An enormous solar flare of the type which scientists are studying with re-doubled attention during the International Geophysical Year. The flare shot out from the sun's surface for a distance of 110,000 miles. Observation stations staffed by scientists of many countries will make a continuous 24-hour-a-day record of the sun's surface during the IGY. They hope to obtain new information concerning the influence of solar disturbances on the earth's weather, long-distance radio communications, auroral displays, and cosmic ray showers.

What's Getting Under Your Skin?



CLIFFORD R. ANDERSON, M.D.

JOE BROWN was a builder, a capable man with big muscles and a broad smile. He employed many men, all of whom admired him greatly. He thoroughly enjoyed his work, and he had many friends.

In spite of his popularity he had his troubles. He had an irritating rash that came and went. Life was miserable for him in spite of his success. The skin on his face, arms, neck, and back would become covered with red, blotchy patches that itched constantly. This was particularly true whenever the weather was warm and humid. Joe had tried all kinds of ointments and medicines Some of them helped for a while, but in the end the rash always returned.

What was the cause of Joe's rash? Was it an allergy? Yes, in a way it was. But Joe's difficulties went much deeper than the surface of his skin. Joe was suffering from what doctors call neurodermatitis. That is a type of skin inflammation brought on, or greatly aggravated by, worry and anxiety.

To meet Joe you would think he never had a care in the world. He could always put up a fine front and make you believe all was well. In spite of Joe's jocular talk and ready smile, there was no happiness underneath. He was merely trying to make the best of a bad situation, which for years he had stubbornly refused to recognize. Joe was desperately unhappy at home. At work he was all that a good boss could be At home he never seemed able to please his wife or his children

It was nobody's fault in particular that Joe's home was not a truly happy place. As usual, there were plenty of faults on all sides. No matter where we go in this world, we will never find perfect homes or ideal families. In spite of all the pretty stories written by brilliant novelists, there are no couples that were "just made for each other," except Adam and Eve. You will remember that even they got into plenty of trouble!

True success in married life does not depend on our being perfect ourselves or on having a perfect mate. It depends almost entirely on our ability to make the adjustments of personality necessary in order that all concerned will be truly happy. This is never a one-sided affair. All the family have to share in one another's joys and sorrows. They must learn to bear one another's burdens.

There is an art to being able to live happily with another person, an art that all too few ever master. Often we show the best side of our natures to the outside world, reserving the worst side for those who are closest to us and who have a right to expect the best from us. Too often we are thoughtless, forgetting to be kind in word and action.

By nature we are basically selfish, and it may take a serious illness to show us our weaknesses Far too many of us are looking for a miracle to straighten out the miserable side of our natures Many of us would find it far easier to submit to an extensive surgical operation than to face up to reality and straighten out the wrinkles in our personalities. Many people think that a series of electric shock treatments or some intricate operation on the brain is the answer to their personality problems. In most cases little or no good will result unless a person is willing to make the change himself.

So it was with Joe. He worked hard and long to provide for his growing family. He was sure that wealth would somehow bring him the happiness he craved He was a good provider, but he failed to show his family any real love, as even his youngest child was well aware.

Often we forget that little children are mirrors reflecting their parents' maladjustments and inability to express affection. Love begets love. Youngsters who are just learning to talk will sometimes come out with the most alarming statements, often to the dismay of their parents The unmatured mind



USIS

He employed many men and women, all of whom admired him greatly He thoroughly enjoyed his work, and he had many friends. In spite of his popularity, he had his troubles

of a little child can all too often show up the weaknesses and frustrations of the adult world

As a businessman, Joe was a real success. In fact, he was keeping two families, for his present marriage was not his first Out at business Joe was a good fellow, but at home the second Mrs Brown was no happier than the first Mrs Brown had been. It was not entirely the fault of the women, although both had their limitations. Underneath, Joe had a bad temper. He did not have very much to say at home, and was often sarcastic, especially when he was tired. On petty things that really did not matter at all, Joe could be as stubborn as a mule, and when he did not get his way he was inwardly angry. But still he said little. He kept his injured feelings to himself, and sulked in a corner. Unfortunately, the children always brought out the worst in their father

With all this stress, something was bound to happen, and in the end it did Joe tried hard to swallow his feelings, but finally they came out on his skin in the form of this chronic rash Several skin specialists examined Joe, but found no specific germs They told him to take more time off to rest Extra rest helped for a while, but the effect was only temporary As soon as Joe got back into the old situation, the rash returned to plague him. To make matters worse, his mother-in-law, who never had a good word for him, came for a prolonged stay Joe was desperate, and his rash itched worse than ever

Finally in his search for help he found a doctor who was willing to sit down and talk things out with him, It was not too easy for Joe, but the doctor insisted that he discuss freely every phase of his life in which he had been under some particular emotional strain. The more Joe talked about himself, the more clearly he saw how constant nervous strain and misunderstanding were contributing to his discomfort. In spite of an outward smile, Joe knew that inside he was a very unhappy person. He had never been able to adjust very well to family life, and that was the reason for much of his bad temper

Frustrated feelings are a cause of skin trouble in a great many people This is because most types of stress within the body are transmitted to the skin. Healthy skin has the power to resist many types of infection, even from the most virulent germs. This is particularly true if the skin is moderately dry and flexible If the skin is constantly damp, it looses its power to destroy germs. Fungus spores from the air settle and grow on damp skin, and they open the way for more dangerous germs.

The sweat glands are under the control of the sympathetic nervous system That is why we tend to perspire a lot more when we are tense and nervous. The resulting damp skin provides a perfect environment for fungus infection. This condition often causes an intense itching of the skin, and the patient may be forced to scratch himself even in his sleep When he cuts the skin with his finger-nails, germs find their way down into the deeper layers Many small abscesses or pustules may result, and may become inflamed and tender. Such conditions are usually worse in the warmer months of the year.

The skin is a remarkable organ. It covers almost every part of the body, and is our point of contact with the world When the skin is healthy it has the power to eliminate many types of germs and other organisms within a few minutes.

(Continued on p. 28.)



Burns Photography, Inc

Manager of Health Physics, Dr. L J Cherubin checks one of the radiation-monitoring instruments at the knolls Atomic Power Laboratory, Schenectady, New York, operated by General Electric Company for the U. S. Atomic Energy Commission

Health

PROTECTING MAN FROM RADIATION

From *General Electric Review*

(Reprinted by permission)

Manager, Health Physics, Knolls Atomic Power Laboratory

HUS far, except for some tragic accidents affecting small numbers of people, the biological damage from peacetime activities . . has been essentially negative. Furthermore, it appears that radiation problems, if they are met intelligently, need not stand in the way of large-scale development of atomic energy. The continued need for intelligence and vigilance cannot be too strongly emphasized, however."

This statement--an excerpt from the National Academy of Sciences report, "The Biological Effects of Atomic Radiation," released in June 1956, stresses the importance of health physicists. This little-publicized group of specialists has been and is quietly fulfilling a vital function within the atomic energy industry in the United States.

These men began their work during the early years of atomic research. At that time, a group of physicists and scientists concerned with protecting personnel from radiation coined the term, "health physics."

Radiation connotes many things. But this article confines it to nuclear radiation—alpha, beta, and gamma rays and neutrons—and X-rays. X-rays are artificially produced when electrons travelling at high speed in a vacuum hit a metallic target. Actually streams of particles, alpha and beta radiations vary in mass and electric charge. Gamma and x radiations are literally rays differing only in their origin and wave length. Neutrons, nuclear particles, carry no charge.

It is essential to know more about one important characteristic of radiation: absorbed by matter, radiation causes atoms to ionize—that is, release electrons. And this property of radiation—ionization of matter—accounts primarily for its biological implications. Generally speaking, the various types of radiation produce similar biological effects on living tissue to varying degrees.

Organs may vary in their sensitivity to radiation. For example, one's skin might possibly withstand twice the radiation level

permitted for blood-forming organs. The volume of tissue exposed to radiation also affects biological significance. Again for example, the permissible limit of exposure to hands, forearms, feet, and ankles is perhaps five times that permitted for the whole body.

Excessive exposure to radiation may lead to serious injuries. For instance, a man could experience cancer of the skin and bone; diseases of the blood as leukæmia and anæmia; eye cataracts.

The time between exposure to radiation and the onset of injury is called the latent period With eye cataracts, this period may be a few years. But exposure to several hundred roentgens of radiation within a day or less could kill a person in a matter of weeks (A roentgen is the quantity of x or gamma radiation that will cause one cubic centimeter of air to emit ions carrying one electrostatic unit of positive or negative electricity.) On the other hand, an exposure of several roentgens in a matter of minutes would probably produce neither an immediate nor a delayed effect.

In most biological effects, tissue recovers and repairs from radiation exposure This is commonly illustrated by the way a person's skin reddens when exposed to X-rays To produce identical reddening of the skin, two short exposures separated by 24 hours requires a higher dosage than a single exposure.

Not until 1895 did Wilhelm Konrad Roentgen discover x radiation in a laboratory experiment The following year Antoine Henri Becquerel accidentally exposed a photographic plate to uranium salts and discovered their radioactive property. Madame Curie, during her celebrated experiments with uranium minerals, isolated the radioactive elements polonium and radium in 1898. And cosmic radiations—their origin is still a mystery -were not discovered until the period 1910 to 1913 by V F. Hess and W Kolhoerster, Austrian-American and German physicists respectively.

The most common naturally occurring radioactive elements include uranium, thorium, and certain forms of carbon and potassium Radioactive gases released from the soil containing uranium and thorium constantly reside in the earth's atmosphere and surface streams. The mysterious cosmic radiations from space consist of penetrating gamma radiation While the earth's atmosphere shields out much of it, the intensity increases with elevation

Normally, a person has a low exposure to natural radioactivity. In Schenectady, New York, for example average elevation, 236 feet background radiation from cosmic and natural sources may total 0 3 to 0 6 milliroentgens a day Of course, the body has a natural radioactivity, too. For human tissue contains radioactive isotopes of potassium and carbon

To the health physicist, natural radioactivity and natural radioactive elements can be an ex-



Burns Photography, Inc

Dr. Jones of Knolls Atomic Power Laboratory monitors radioactive solutions beneath an exhaust hood during an analysis for traces of nuclear fission products He wears plastic radiation-detecting rings on his index fingers and a face respirator to guard against inhaling any contaminated particles. When the analysis is concluded, the hood is cleaned and the sponge disposed of along with other radioactive wastes.

asperating nuisance. When he assays human wastes to determine the radiotoxic elements deposited internally, the relatively large amount of naturally radioactive potassium presents some difficulties.

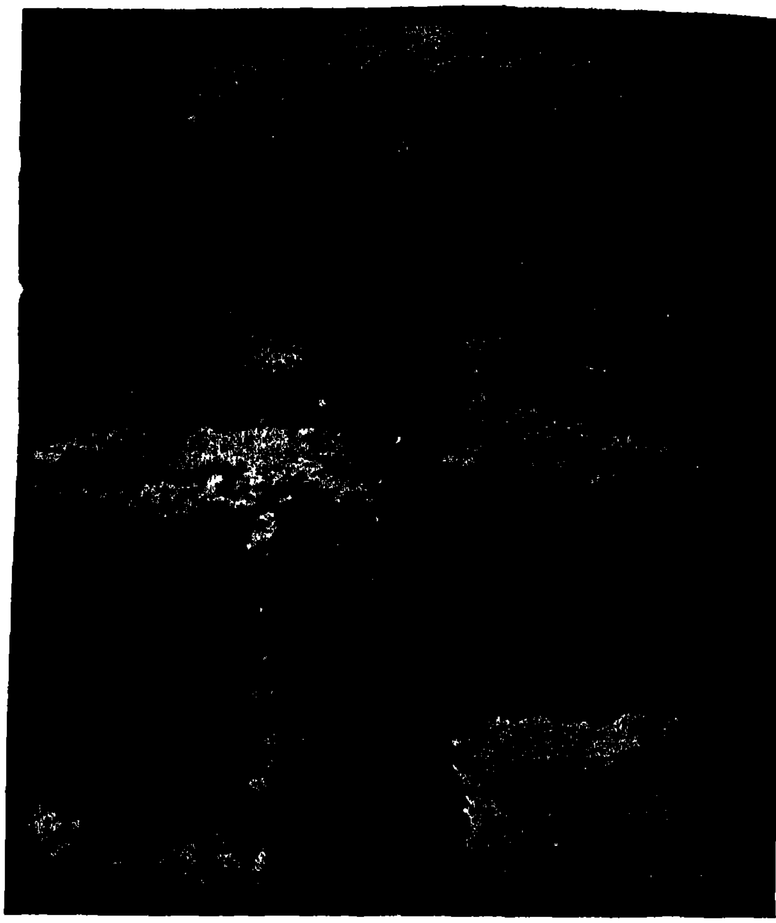
A similar difficulty arises when the health physicist samples the air for highly toxic radioactive elements like plutonium Here the accumulation of decay products from radioactive gases present in the atmosphere decreases the sensitivity of his instruments to the toxic radioactive elements For these radioactive decay products attach themselves to dust in the air and collect--along with the radioactive plutonium --on the sampling filter papers.

One can be injured by exposure to radiation in two ways: external or internal irradiation through the intake--by one means or another—of radioactive materials

External irradiation presents the most common exposure problem while X-ray machines, particle accelerators, and nuclear reactors are operating Generally speaking, the accelerators and reactors must be enclosed in heavily shielded cells for safe operation The shielding requirements of an X-ray machine vary depending on its operating energy.

In any event, shielding is the main protective feature against equipment that produces radiation. Operated remotely and shielded adequately, X-ray apparatus, particle accelerators, and nuclear reactors are safe. The greatest danger would arise if one were trapped in a cell while radiation-producing equipment was operating. (Industry takes elaborate precautions to prevent this from happening.)

Such sealed sources of radioactive materials as radium, cobalt, or iridium—for radiographing or experimenting—are potential hazards Although stored in heavily shielded casks, these materials might be unshielded while in use. One gram of radium, for example, produces a radiation level of 8,400 roentgens an hour at a distance of one centimeter. At one meter the radiation level would be 0 84 roentgens an hour (The radiation level from a point source decreases inversely as the square of the distance. Thus increasing one's distance from a radiation source constitutes an effective safety measure)



Nuclear tests endanger human lives

Radioactive materials deposited on skin or clothing increase the radiation hazard because of close contact. An exception to this is alpha radiation. Alpha particles cannot penetrate the horny, or dead, layer of skin. Accordingly, it has no biological significance. But even so, a person cannot ignore alpha-emitting elements such as plutonium; if taken internally, they would damage your inner organs.

A person can unknowingly take radioactive elements internally in many ways: through contaminated foods, cigarettes, air, and even through skin absorption. One's hands, if contaminated, can easily transfer radioactive materials by contact Air, too, can be contaminated with radioactive materials in many ways: from fires, fabrication of nuclear fuel elements, ventilation systems or inadequate ventilation, ruptured radiation sources, and spills of radioactive solutions. Cuts or abrasions that come into contact with contaminated materials will introduce radio elements into the bloodstream.

Actually, all radiations are potentially dangerous. Strong light, intense heat or sound, and nuclear radiation—all can injure one. The five senses generally alert a person to the danger of light, heat, sound, or poisonous atmospheres. But they fail to set one on guard against subtle nuclear radiation and X-rays.

Thus when radiation-producing machines were devised and applications found for radioactive elements, methods to detect and measure these radiations had to be developed. This responsibility, along with a host of others, fell to the health physicist.

The employees in an atomic energy plant or laboratory are, like all people, exposed to a natural background radiation. Some are exposed to man-made radiation in negligible amounts. Occasionally, a small number of these people exceed the recommended levels of radiation laid down by the U.S. Atomic Energy Commission (AEC). But the incidence of serious exposure is not high. In fact, the rate of radiation injuries is considerably lower than the rate of injury from the usual type of industrial accidents.

If facilities are properly designed and safety procedures followed, serious radiation exposure is not likely Of course, some low-level exposure does occur. for instance, when employees calibrate instruments with radioactive sources, collect accumulated wastes for packaging and disposal, remove filters from ventilation systems, or perform maintenance work on a reactor Then too, assembling fuel elements or removing them from reactors also causes low-level exposure. Chemists who analyze radio active solutions or irradiated specimens also receive some low-level irradiation, as do other scientists in researches on physics, engineering, metallurgy, biology, and so on.

As for protective devices, atomic energy industry requirements do not differ much from those normally found elsewhere. For instance, fresh-air masks are used where the air is contaminated. The primary use of this respiratory protective equipment occurs when employees perform maintenance in chemical process areas, handle wastes, or weld contaminated equipment.

In the nuclear science laboratory a research chemist studies the effects of radiation on materials On entering the installation he receives a picture badge that identifies him and his type of security clearance A metallic holder attached to this badge contains a film packet similar to the one a dentist uses for X-rays –that measures radiation dosage.

Entering the chemistry building, he may first remove his clothing in a "change" room, then in another room, he may don plant-issue shoes, trousers, shirt, and laboratory coat Once in his own laboratory, he prepares a specimen material for irradiation, then moves on to the building that houses the radiation source a few thousand curies of radiocobalt

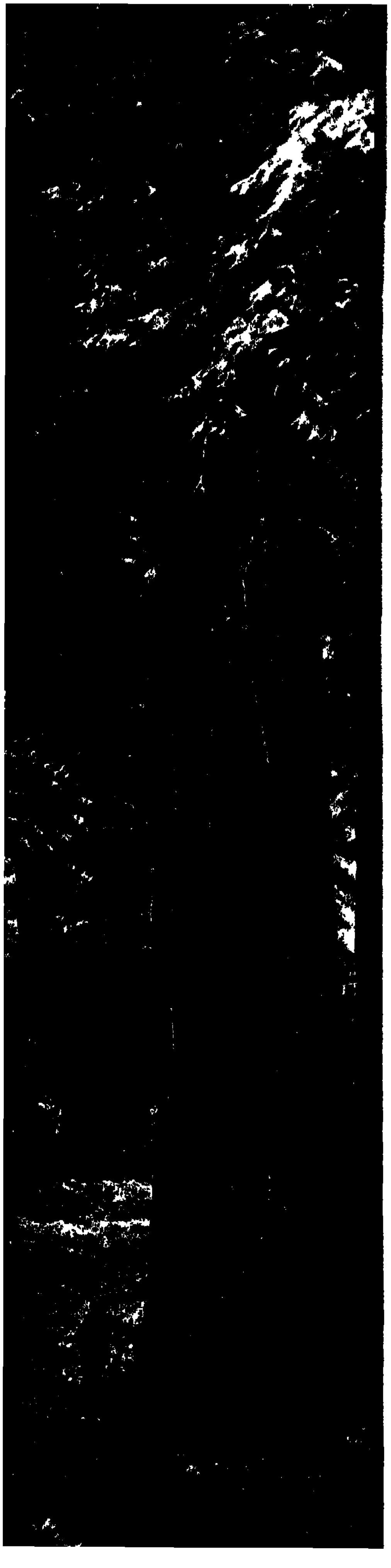
The irradiation facility consists of a pit that holds water to a height of 15 feet, in which the cobalt is immersed At the top of the pit the radiation level is low perhaps 10 milliroentgens an hour. A railing around the pit and a metal bar screen that covers it prevent anyone from falling in (At the railing the dose rate measures about 4 milliroentgens an hour) As an additional precaution, an alarm sounds should the water level decrease

After lowering the test specimen into the pit, the chemist leaves during the actual irradiation, later returning to remove the specimen after a given time interval. He wears the same protective clothing. Despite the slightly contaminated water in the pit, his specimen is not radioactive because the radiocobalt's gamma rays do not activate it The scientist's total radiation exposure perhaps six milliroentgens.

Next, let us look in on another chemist engaged in analyzing radioactive samples His laboratory—posted as a radiation zone--contains ventilated hoods, lead barricades to shield samples beneath the hoods, a wall monitor that continuously samples the air for radioactivity, and portable radiation-monitoring instruments. Additional to the standard protective clothing and the film badge, this chemist wears a hand-monitor film ring—a plastic finger ring with dental film contained in its removable top. Such a monitor has particular importance here: the chemical analyst frequently exposes his hands to higher radiation levels than the rest of the body.

To prevent ingestion of radioactive materials in the laboratory, general rules prohibit chemists from

(Continued on p. 29.)



Childhood Defects

WILMER C. HANSEN, D.D.S., M.D.

HIPPOCRATES, the father of medicine, once remarked, "War is the only proper school of surgeons." No physician or surgeon would condone war as an instrument of learning, but it must be admittd that the two world wars have been valuable means of accelerating the progress of plastic and re-constructive surgery.

Wartime plastic surgeons reviewed the medical books and journals and brought together scattered contributions to plastic surgery. Their team-work resulted in tremendous success, so that now the man who has been disfigured need not be condemned to a life of unhappiness because of his appearance. Their work showed that the surgeon's art is not simply saving and curing, but also creating.

With World War II this truth became even more evident. Even on the battlegrounds, when all the surgeon could do at the moment was to save a wounded man's life his previous training reminded him that a plastic surgeon would follow him.

Three recent innovations have increased the scope of plastic surgery in everyday practice

1. The introduction of bacteria-killing antibiotics, which brought the plastic surgeon a means of breaking down the barriers between his practical skill and his theoretical knowledge. For example, success in skin-grafting burned patients had been limited to smaller grafts because of the danger of infection over a large surface. Antibiotics have largely overcome that obstacle

by making cleaner fields for skin grafting possible, and thereby increasing successful "takes."

2 The perfection of a new instrument, the dermatome, which allows the surgeon to cut large areas of skin a uniform predetermined thickness. Before this instrument was invented, it was difficult to cut skin a uniform thickness necessary for a successful cosmetic graft. With the dermatome, grafting of large areas can be undertaken with every hope of success.

3 The perfection of artificial substitutes for missing parts of the body, called prosthesis Prosthesis has been greatly improved since the war years, and almost complete functional capacity has been restored to men and women who would have been classified as cripples in years gone by

By 1945 we were a long way from the primitive beginnings of plastic surgery in ancient Egypt and India.

In this article we will focus attention mainly on the re-constructive and cosmetic operations available for infants, children, and young people with congenital or acquired physical defects Reconstructive surgery re-builds what has been destroyed by accident or forgotten by nature Cosmetic surgery rectifies shortcomings that do not affect body functions and makes facial and bodily features meet our present-day standard of acceptance There is often an overlapping of the two fields

About one child in every eight hundred is born with a cleft lip or palate It is caused by a failure of any part of the lip or palate to develop and unite during the fetal stage Cleft lip is commonly called harelip because of its resemblance to the notch in a rabbit's lip It may range from a tiny nick in the lip to a complete cleft involving the floor of the nostrils

This condition is most common in boy babies, most often on the left side, and in ten per cent of cases is associated with other deformities More often there is a family history of some form of cleft in forty to fifty per cent of cases In the rest, there is probably at least a subtle tendency in the genetics of both mother and father that results in a baby with this deformity



Photo A V Ramamoorthy

There is a subtle tendency in the genetics of both mother and father that results in a baby with this deformity

The treatment of a cleft lip alone generally requires the least amount of attention so far as rehabilitation is concerned, certainly less than if a cleft palate is also present Closure is generally undertaken when the baby is three to eight weeks of age, although some surgeons use the baby's weight as their gauge. Later, minor surgical procedures may be necessary for the correction of slight deformities of the lip line or of the nose

Recently a new technique for closing a cleft lip was devised--a method so superior to former approaches that many persons in their forties and fifties are having the results of their past operation altered by a newer operation The essential difference in this method is that the scar line is a stepped line rather than a straight line The resulting scar does not have a tendency to contract and lift the lip into a notch on the affected side

Infants born with a cleft palate are generally submitted to surgery when between eighteen and thirty months of age, but this rule, too, may vary according to the particular plastic surgeon. The number of operations necessary for complete correction varies with the length, width, and degree of the cleft After surgery the plastic surgeon may wish to refer the child to another specialist, such as a speech therapist to overcome the tendency to a nasal type of speech, and an orthodontist to overcome the inevitable misfitting of the upper and lower teeth. An important part of the child's rehabilitation is a stable home life with loving care and the sense of security it brings

Few families escape the period of adolescence when one or more of their members passes through the unhappiness of severe acne. With careful diet and a few years of patience, many cases gradually recede and leave no visible reminder But in more severe cases

(Continued on p 27.)

STORY TIME

NEVER GIVE UP

Arthur S. Maxwell

JOHNNY was feeling very blue. He had just got his report card and it showed that he had failed again—in arithmetic

He hated to tell his dad about it, but there was no use trying to hide the sad fact. Dad would find out sometime.

"It's no use," he said, as he showed the card to Dad "I just can't do arithmetic, that's all. I get the sums wrong every time. I don't think I shall try any more."

"Now, now," said Dad. "That's no way to talk If you stick at it you are bound to find the right way to do these problems someday."

"No, I won't," said Johnny. "I'm no good at arithmetic and that's all there is about it."

"You remind me of the man with the two bird dogs," said Dad

"What man?" asked Johnny.

"Just a friend of mine"

"What about his dogs?"

"I'll tell you if you'll come and sit down beside me for a couple of minutes."

Johnny sat.

"This man," said Dad, "bought a couple of dogs one day. Bird dogs, they were, and very expensive, and the kind that hunters use. When he brought them home his wife said to him, 'What beautiful dogs!' And they were. They had such strong bodies and fine, keen faces. Soon they were romping all over the yard.

"Just then my friend and his wife heard a long, low growl in the distance. Looking up they saw it was the neighbour's bulldog coming to pay his respects to the new arrivals. Instantly the two bird dogs began to growl, too.

"My friend's wife was afraid. 'There's going to be a fight,' she said. 'Hadn't you better put the dogs in the cellar?'

" 'If those two bird dogs can't lick one bulldog,' said my friend, 'they aren't worth much '

"Well Johnny, the fight began. There was a terrible snarling and snapping, and it went on for twenty minutes. Then the bulldog slunk away.

" 'There you are,' said my friend. 'Now that's settled.' But it wasn't. Next morning the bulldog was back again. There was another terrible fight, and once more he was beaten and slunk away.

"The next morning, about the same time, the bulldog returned and the same thing happened.

"Then my friend had to go away on a trip. He was gone for about two weeks. On his return he went into the yard to look for his precious bird dogs, but couldn't find them. He went indoors and asked his wife. 'Where are my dogs?' he said.

" 'Down in the cellar,' said his wife.

" 'In the cellar!' he cried. 'What are they doing in the cellar?'

" 'That bulldog,' she said, 'came back every day for five days He simply didn't seem to know when he was licked. After the fifth day the bird dogs went down in the cellar and now not even the fire department could get them out' "

Johnny laughed out loud.

"What a dog!" He said.

"Yes," said Dad "If dogs could do arithmetic, I'm thinking that bulldog would be at the top of his class."

Johnny got the point right away

FAZIL'S SECRET (Part I)

Tommy Tucker

THE students were lining up on the playground. In a moment Fazil and Bob, the two baseball captains, would be choosing their teams

"All right, begin now," the teacher said.

Bob called one boy, Fazil called another; they kept on until there was only one boy left—Rustum.

And it was Fazil's turn. "O.K., Rustum," Fazil said reluctantly, "you're on my side." Fazil scowled. He didn't like to be stuck with Rustum. No one did. It wasn't that he couldn't play; he could play very well. But he was always getting angry and wasting a lot of time arguing.

Bob grinned at Fazil. "You got stuck with Rustum this time!" he laughed

Fazil frowned. "Don't be so cheerful," he answered. "I've got a little plan that may teach Rustum some sportsmanship."

Bob laughed. "You think you can teach Rustum sportsmanship? What a joke. He'll never learn *that!*"

Fazil stared at Bob. "Well, since I have to have him on my side, I'm going to try."

Bob grinned. "You're crazy if

you think you can change Rustum. You really are!"

But Fazil knew he was going to have to do something fast. There was going to be a big game in a couple of weeks. The two teams would play against each other. The winner would be treated to a trip to a park by the losing team. It was going to be a lot of fun.

And everything was going great, until Fazil got stuck with Rustum. He wouldn't let his team down. Yet if Rustum spoiled this the way he usually did, the game would be lost.

And if Fazil's little idea didn't work, he knew his own reputation would be ruined.

They played that afternoon. As usual, when it came time for Rustum to be up, things went wrong Rustum complained about the pitcher, then he complained about the bat and when he struck, and missed, he complained about the pitching.

(Concluded Next Month)

DOES THE SUN RULE THE WEATHER?

(Continued from p 15)

in record-breaking numbers, and the twelve earth satellites which the United States plans to launch will gather first-hand information regarding the arrival of the sun's invisible outpourings

Scientists have already shown that by far the greater part of the sun's enormous discharge of energy is in the visible and near-visible wave lengths which under favourable conditions can reach us at the surface of the earth

One fact apparently established, at least for short-term conditions, is that these visible forms of sun energy are remarkably stable in output According to Dr John W Evans, director of Sacramento Peak Observatory in New Mexico, new methods of measurement show that this type of solar output has for three years at least not varied more than one-third of one per cent.

Such steady radiation, Dr. Evans points out, is calculated to keep the weather unchanged, without violent variations Therefore it would be of very little use in attempting to forecast weather changes.

But the much smaller fraction of invisible short-wave radiation, that which is stopped high above the earth in the ionosphere and the ozone layer of the atmosphere, comes in violent bursts, largely from the flares or extremely high-temperature explosions that accompany sunspots Such violent outbursts last at most for a few minutes to a few hours.

At present the theory is that this violently varying ultra-violet output, impressed upon the steady-state radiation as voice modulation is impressed upon the carrier wave in radio, can similarly be used to convey to us a message from the sun regarding forthcoming earthly weather.

Scientists must first discover if the message is there at all If it is, they must then try to discover how to interpret its meaning

This will be one of the major studies of the International Geophysical Year. During the Year the sun will be watched by a score of great observatories located in different parts of the world They will be able to keep the sun in view almost all of each twenty-four hours By this type of co-operation between scientists of many countries, the mystery of the sun's real influence on our weather may at last be solved.

A SONG IN THE NIGHT

(Continued from p. 3.)

But to the trained and sensitive ear of faith it is the music of heaven. Something good and permanent will come of all this disillusionment and fear. Something great and beautiful will follow the agony and despair of those dark moments spent alone. But we must learn to trust and to believe that "all things work together for good."

Affliction will teach us this song or drive us to despair. We must each decide what shall happen when and if we must enter the night. There is something better beyond, for which the discipline of life prepares us, but it will be too late to learn to sing our song over there, for all will be day in that distant land.

Here and now in this practical, workaday life we are to catch the strains of heaven's song of faith and learn to sing with the great and the good of all ages. May we not fail of this lesson.

"In the full light of day, and in hearing of the music of other voices, the caged bird will not sing the song that his master seeks to teach him. He learns a snatch of this, a trill of that, but never a separate and entire melody. But the master covers the cage, and places it where the bird will listen to the one song he is to sing. In the dark, he tries, and tries again to sing that song until it is learned, and he breaks forth in perfect melody. Then the bird is brought forth, and ever after he can sing that song in the light. Thus God deals with His children. He has a song to teach us, and when we have learned it amid the shadows of affliction, we can sing it ever afterward."

position, and I found him to be a natural candidate for the operation. In the months since surgery he has been transformed into a completely different person. He is no longer shy and uninterested in his appearance; instead, he is confident, and meticulous in his personal grooming

Most congenital anomalies, whether they are lop ears, webbed fingers, or cleft lips and palates, should be surgically corrected before school age. These conditions are not so important when a child lives in a neighbourhood where his companions have long since grown used to them, but when he is thrust into the new surroundings of school, his new associates are not likely to be tolerant of his handicap.

It is the aim of the plastic surgeon to make it possible for all children to grow up as nearly physically perfect as possible This can be done only if parents cooperate in giving these abnormalities early recognition, appreciating their significance to the child, and bringing him under medical attention as early as possible

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WHAT'S GETTING UNDER YOUR SKIN?

(Continued from p 17)

To keep the skin healthy we must give it proper care at all times Strong soaps are not good *for the skin at any time.* Such chemicals may remove the tough outer cells that protect the deeper layers of the skin, down where the delicate nerve endings and the myriads of microscopic blood vessels are located

These tiny vessels bring nourishment to the skin and help remove waste tissues from the body through the sweat glands These tiny blood vessels must carry out another important function It is their responsibility to help keep the body cool and protect it from becoming over-heated. In this they are aided by the sweat glands

When the internal organs become over-heated, the brain automatically directs the flow of blood from the deeper tissues out to the skin, where it can be cooled off. The outpouring of moisture in the form of perspiration carries excess heat out to the surface of the skin, where it evaporates, carrying with *it more than five hundred calories* of heat for every gram of water turned to vapour This wonderful protective mechanism of the body assures us a constant temperature within our bodies, whether the air outside is stifling hot or freezing cold

The skin reacts quickly to emotions. When we are paid a compliment, most of us blush freely When we are too warm our skin will become red. Such extra colour shows when the small blood vessels in the skin become suddenly dilated, and carry more blood than usual The reverse may happen when we are gripped by fear, when the skin will become blanched It will be noted that these different skin reactions are due to strong nervous impulses, most of which are beyond our control. That is why nervous patients are often afflicted with skin diseases Many different medications are prescribed for these conditions, and some of them are of real benefit to the patient But there are times when all treatment will fail unless the patient is willing to face up to his problems and make some atten to solve them.

To recognize the underl cause *of the trouble* is just as portant for the rest of the fa as for the patient Only when family understands, can a pr adjustment be made. Family fr tion may not always be the ca of irritating skin conditions, but will often prolong the disabil and make life miserable for th patient and the other members the household. It is important fo the patient with neurodermatitis t tell the doctor what is "gettin *under his skin." Otherwise* the may be no cure.

In Scotland there is a famou bridge across the Firth of Forth no far from Edinburgh When th engineers were building this gian structure, they appointed a da when the great steel girders in th centre were to be placed in positio and the mighty bridge was to b finished. A celebration was planned A great crowd was present whe the giant cranes picked up the ste *girders and lifted them into plac* But the girders were too short! Th day was cold, and the great ste spans had contracted just enoug to prevent the rivets from fittin properly together

So the engineers got busy an built two huge fires, one und each end of the bridge, with th hope that the heat would allow th metal spans to stretch far enoug to finish the job. But still th girders were too short After wai ing all day, the crowd went hom disappointed The next day wa fair and warm, and the sun wa shining brightly. Once more th engineers brought the central spa into place, and this time the girde fitted perfectly. The job wa finished without trouble. All th was needed was the gentle warmt of the sun over the whole span, an all was well

So it is with life. Often th jagged pieces of our personalit *do not fit together as they shoul*

We struggle and fuss and fume. We fail in spite of all we can do. The cold blasts of family criticism and the icy chill of sarcasm rob us of our chance to do our best in life. Something is continually "getting under our skin." What we need and desire most is to be accepted and appreciated by those who are nearest to us by the ties of blood. We can do this only if we are truly willing to lay aside our petty differences and our own selfish point of view. Robert Burns wrote truly:

Oh wad some power the giftie gie us
To see oursels as others see us!

Happy family life is the greatest need in our world today. Harmony in the home brings the richest rewards. It produces children with balanced personalities, with souls that can appreciate the beautiful and true, and with minds that can spread abroad the gospel of love in their own family, in their community, in their nation, and throughout the world.

HEALTH PHYSICS: Protecting Man from Radiation

(Continued from p. 21.)

smoking, eating, or pipetting liquids by mouth.

Contamination problems arise when handling radioactive materials in a liquid state. If solutions are vaporized, spilled, centrifuged, or agitated, the likelihood of spreading radioactive materials increases. Potentially hazardous to the chemist, too, are self-inflicted jabs from contaminated pipettes or cuts and abrasions from contaminated glassware or metallic equipment.

If you conclude from this that the analyst has a relatively high potential exposure both externally and internally, you will be correct. The degree of hazard, however, depends on the nature and amount of radioactive materials that are present.

For his own protection, the analyst minimizes the radiation hazard in three ways: he limits the amount of radioactive samples processed and carefully monitors his laboratory during the operation. Should radioactive spills occur outside the ventilated hoods, he wears a respiratory mask during the clean-up. Periodically, he submits samples of his urine for audit of internally deposited radioactive materials. And daily, air samples from the laboratory are analyzed to control the air-borne contamination adequately.

Now, let us focus on a physicist — one utilizing a low-power experimental nuclear reactor for research. Again, this scientist requires monitoring devices and some protective clothing—but not while the reactor is operating.

Even a reactor of only zero power—one watt or less—is generally located in a concrete cell that contains the radiation. The physicist operates the reactor remotely from a control room. Once it shuts down, however, the situation changes. Then the physicist enters the cell to remove his experimental samples from the reactor. In so doing, he exposes himself to radiation externally as he handles the radioactive materials. Data detected by instruments inside the cell and recorded in the control room tell him the amount of residual radiation after shut-down. This radiation can range up to several roentgens an hour for the reactor, and for the radioactive samples, 100 rads per hour at contact. (A rad is an amount of radiation sufficient to cause one gram of animal tissue to absorb 100 ergs of energy. The amount of energy absorbed by tissue is a function of the tissue's composition and wave length of the radiation reaching it.)

Accordingly, upon entering the cell at shut-down, the physicist monitors carefully, limiting his time inside to short periods. Irradiated specimens are handled meticulously, using tongs or similar devices.

The health physicist, through the co-operation of all who work within the nuclear energy enterprise, has been pre-eminently successful since the early days of atomic research. Both management and professional workers have helped him immeasurably by their recognition of radiation's great potential hazard.

Typical achievements will be found in radiation-exposure control at the Knolls Atomic Power Laboratory, located in Schenectady, New York, and operated by General Electric for the U.S. Atomic Energy Commission. Since its inception in 1946, not a single radiation injury has occurred at the laboratory.

The future looks just as promising. For today the health physicist has experience, knowledge, and tools at his disposal to meet the radiation hazard with great confidence. Still, in the development of power reactors, many challenges await him: feasible solutions for confining fission products in the event of an accident sufficiently great to be labelled catastrophic and treating and disposing of radioactive wastes, to name a few.

As the application of radiation and radioactive materials increases in industry, medicine, and research, the demand for health physicists expands proportionately. This need extends to health physicists who direct their efforts not only toward radiation-protection matters but also toward developing nuclear instruments, radiochemical analytical methods, and industrial hygiene.

(The formal organization of a Health Physics Society at Ann Arbor, Michigan, in June 1956—with a membership of more than 700—demonstrates the growth of the health physics profession.)

In typical AEC-sponsored laboratories at the present time, the health physics force constitutes from one to three per cent of the manpower. They direct research and development efforts toward improving radiation-protection programmes, and at the same time they reduce the cost of existing safeguards.

Progress in this field has been significant. You can be certain that wider application of radioactive materials will not be restricted because of the radiation hazard.

GARDENING FOR HEALTH

MORE FLOWERS

D. G. Cooper

Cannas

CANNAS are generally propagated by seeds or by division of the tubers. They are one of the hardiest of all bulbous flowering plants, and look equally attractive whether planted in beds or in pots. Of the various different species of Cannas, the Dwarf variety—growing to a height of about two feet—is most popular, since it never fails to add to the beauty of the garden, and always presents a bright splash of colour when planted around a pond or near the lawn. Moreover, Cannas are easy to propagate, and require no special care. Perhaps this fact alone may account for its being grown in practically all gardens.

Cannas thrive best in a rich moist soil, having a sunny location. Tubers should be planted about eighteen inches apart in beds which have been heavily manured. As cannas are gross feeders, the plants should be watered liberally and liquid manure may be given once a week with advantage Shoots which have already borne flowers, should always be cut off right upto the base of the plant This will promote new healthy and vigorous shoots to sprout out within a short period. The tubers should be dug out from the beds once a year and re-planted after dividing the roots

Cannas raised from seeds, often produce some excellent varieties. It is necessary to soak the seeds in water for a few days before sowing, in order to hasten germination. Cannas grown from seeds usually flower within a year.

Dahlias

Dahlias hold a permanent place in everyone's garden Easy to propagate from seeds, cuttings and tubers, they are rarely surpassed in beauty for their wide range of appealing colours, size, shape and formation Excellent as cut flowers, Dahlias are often grown on large scale for commercial purposes as well A collection of Exhibition, Cactus, Peony, Pompon or even the single bedding variety, is indisputably a sight worth seeing

Dahlias should be started from seeds or bulbs in the month of May-June. Seeds may be sown in boxes or beds, and covered with a layer of fine soil to a depth of about half an inch When the seedlings are two inches high, they should be transplanted in their permanent quarters Staking the plants is necessary once they have attained a height of 1½ to 2 feet Liquid manure prepared from fresh cow-dung, should be given the plants once a week, when the buds appear. For large Exhibition blooms, it is necessary to pinch off the lateral shoots, and leave only the strong and vigorous terminal buds.

Dahlias propogated from bulbs, may be planted either in large pots or in the ground, at a depth of about two inches The compost should consist of two parts leaf mould and decomposed stable manure, one part sand and red earth and one part good garden soil When the first shoots appear, keep only the strongest and remove

GARDEN CALENDAR FOR SEPTEMBER

Plains

Vegetables	Sow Cress, Cauliflower, Lettuce, Peas, Spinach, etc
Flowers	Dig around Canna plants and mulch with stable manure Make cuttings of Carnations, Geraniums, etc.

Hills

Vegetables	Sow Cress, Leek, Knol Khol, Onion, Parsley, Spinach, etc
Flowers.	Sow Cineraria, Primula, etc Make cuttings of Fuschias
Fruits·	Sow seeds of Apples, Apricots, and Pears.

all the other side-shoots The side-shoots, if planted again in another pot, will easily take root, that is, if more plants of the same variety are required. The after care of Dahlias grown from bulbs, is similar to those propagated from seeds. When the flowering season is over, the supply of water should be gradually reduced, till the whole plant dries up. The bulbs should now be removed and stored in a cool dry place. If the bulbs start to shrivel, a little water should be sprinkled over them. However, excess moisture will cause the bulbs to rot.

To prevent aphis and caterpillars from devouring the young shoots of the Dahlia plants, Nicotine solution should be sprayed regularly.

THE DOCTOR SAYS

?

FOOD FOR MOTHER AND BABY Ques.—"I would like to get advice from you on the following points:

1 I have a daughter two months old She is about nine pounds in weight now After this delivery, my wife is too much reduced. She cannot give sufficient milk to my daughter Moreover pure cows milk is not available in this locality Will you please let me know whether any other food can be given to the child, and if so what food can be given?

2 Regarding the mother will you please suggest as to how to keep her in sound health?"

Ans —1. It would be well for you to get Lactogen in powdered form for the baby This can be diluted with water according to directions on the tin and will provide proper nourishment for the baby. I would also suggest that the baby be given supplementary vitamins such as ABDEC Drops by Abbott, or some other good, standard brand Follow the directions on the bottle according to the age of the child The child could also begin partaking of regular food, which should be of an easily digestible nature and be given first in small amounts If you have no objection to partaking of eggs, the yoke of the egg would provide the iron that the baby requires in building good blood The yoke of one egg daily would be sufficient

2 The mother should eat well She has probably lost blood and should be taking one iron tablet three times a day following meals Fersolate is a good inexpensive tablet She should also be taking two Yeast tablets three times a day, and if possible, one quart of milk daily She should take light exercise in the open air and sunlight

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SKIN INFECTION: Ques —"I am 30 years old now As a boy I was afflicted with pimples on my face Even at this age, when I press the skin of my face and sides of the nose with my fingers a white odorous substance is discharged. Over and above this the back of my ears and ear-lobes too have this infection which erupts occasionally giving white matter I underwent X-ray treatment for this, which a skin specialist advised me would cure me radically The X-ray treatment at the early stage, gave me very little relief I have also undergone high dosages of Penicillin injections Sulphanilamides don't agree with my constitution Will you kindly advise me some effective treatment for this affliction?

Ans —You must eliminate the use of fats, chocolate and sweets from your diet Wash your face with a good grade of soap, like Cinthol by Godrej several times a day Apply rubbing alcohol afterwards, which serves as an astringent Hot steam baths to the face before washing will help eliminate excessive fatty substances Eat an abundance of fresh fruit I would suggest you go to a hospital clinic for a careful examination and personal advice

1 This question and answer service is free only to regular subscribers

2 No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases

3 All questions must be addressed to The Doctor Says Correspondence personally with the doctor is not available through this service

4 Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES Answers cannot be expected under ONE MONTH

5 Questions sent in on Post Cards will not receive attention.

6 Make questions short and to the point Type them or write them very clearly

7 Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published Address "The Doctor Says," Oriental Watchman and Herald of Health, P O Box 35, Poona 1.

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FUNGUS INFECTION OF NAILS Ques - Six years ago one of my finger-nails got rotten after the formation of pus A new nail grew but not as strong as before About a year ago another nail got rotten and dropped off and the skin below the nail became thickened At present two nails on my right hand and three on the left are in this condition Kindly advise me what to do about it?"

Ans —My impression from the description you give of the condition of the nails is that you are suffering from a fungus infection You should go to a well-qualified surgeon who will remove the affected nails and scrape the nail bed The new nail as it grows should be free from infection and normal in appearance The affected portion of the nail, if not too great could be cut away and Whitfield ointment applied

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SINUSITIS Ques -"I suffered frontal sinusitis about one and half years ago, and about nine months ago it came on again I have taken a course of Penicillin with like success and have been advised by one nose specialist to undergo a sinus operation and another suggests drainage of the lower sinuses What do you suggest?

Ans Suction drainage done by one experienced in this method is effective in draining the cavities when this is indicated Allergic sinusitis would require anti-histamine treatment

?

PITTED SKIN Ques -"I suffered with pimples for a considerable time but since the condition has cleared my skin is covered with pits and holes What could I do to have a smooth skin?"

Ans Pits and holes in the skin left after pimples have gone may be removed by sandpaper surgery The skin is frozen and sanded down level with sterile sandpaper, and sterile dressings applied When the new skin develops fully, the marks, unless too deep are gone Recently an electric plane consisting of motor and a small steel circular wire brush is used instead of sandpaper This gives much better results I do not think you can obtain this service in your section of the country

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COCOA Ques -"What are the merits of cocoa taken as a beverage with milk? Is it preferable to Ovaltine or coffee?"

Ans Cocoa is to be preferred to coffee as it is not considered a habit-forming drink Coffee contains caffeine which is a powerful stimulant and to my mind, should not be used as a beverage. Ovaltine is preferable to cocoa as it contains more nutrients

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THE LAST WORD

GEORGE M. BAROYA

Pituitary Role in Breast Cancer

One possible cause of breast cancer, or at least the sustaining stimulation of breast cancer, is hormones from the pituitary gland in the skull says Dr. Jacob Furth of Children's Cancer Research Foundation, Harvard Medical School, Boston

The pituitary gland is a mosaic of several differentiated cells with well-defined functions It has been possible to develop tumours of the pituitary of specific cell types by sustained stimulation Growth persists as long as the stimulation is maintained

Three types of functional pituitary gland tumours have been established One influences the thyroid, another the mammary, and the third the adrenal glands The mammary-gland-influencing tumours are brought on and maintained by continuous excess of the female hormone

Because of estrogen influence on the breast tumour doctors now advise removal of the pituitary gland in breast cancer that has spread to the bones and other parts of the body With the pituitary influence removed, the growth of the cancer is retarded and the patient's pain is reduced

Leukæmia Virus

Leukæmia may be caused by a cancer virus, according to Dr Joseph W Beard, professor of experimental surgery at Duke University Work done by a Duke University team adds strong support to the virus theory

For more than fifty years some investigators have suspected that a virus was the cause of cancer Opinions have been divided, however

The Duke team has isolated three separate viruses that cause forms of leukosis in chickens, diseases closely resembling human leukæmia. These findings along with recent reports on the virus cause of leukæmia in mice by Dr Ludwik Gross of the Veterans Administration Hospital, New York City, and Dr Charlotte Friend of the Sloane Kettering Institute, emphasize that some human cancer may be caused by a virus.

During the past seven years the Duke team has purified a true cancer virus They have proved conclusively that the virus has enzyme activity, which plays a major role in producing cancer Dr Beard predicts that the answer to the long-debated question of whether human leukæmia is caused by a cancer virus is now only a matter of time and money

Synthetic Penicillin

Two scientists at the Massachusetts Institute of Technology in the United States have produced synthetic penicillin after nine years of research, the institute announces. They have solved a problem that has been considered one of the most baffling in chemistry

Penicillin, normally produced from moulds by a fermentation process is one of the most valuable antibiotic or "miracle" drugs. It has saved thousands of lives since its first use on a human being in 1941 Ten new kinds of the chemically produced penicillin are now being tested for medial use

While the synthetic penicillin will probably cost more than the natural variety, it is hoped that it will prove effective against disease organisms that now resist natural penicillin and will also be effective against a greater number of infections There is also the possibility that the synthetic product will have less tendency to produce allergic reactions —*USIS*

"Heart Pump" Aids Surgeons

Development of a "heart pump" at Ohio State University Health Centre in the United States is enabling surgeons there actually to halt heart action for as long as 15 minutes during major heart surgery cases

Ten years ago such stoppage of the heart would have caused death and was considered impossible Today, in cases in which surgery is successful in correcting heart abnormalities, the patient comes out of the experience healthier than before, the University says

The basic objective of the "heart pump" is to detour blood away from the heart and lungs so that the heart is empty of blood and the surgeon has clear vision while correcting a heart abnormality. This means temporarily relieving the heart and lungs of their functions, but at the same time maintaining the circulation of blood in the body.—*USIS.*

Radioactive Cobalt Curbs Cancer

The U. S. Veterans Administration has put into operation a huge radioactive cobalt machine to treat deep seated cancers.

The machine weighs 16 tons and is housed in an underground room two storeys high In the treatment room the patient is placed inside a metal ring which contains radioactive cobalt, a peaceful product of atomic energy The ring is turned in a full circle around the patient, which allows a maximum amount of radiation to be aimed at the cancerous tissue

The machine's radioactivity comes from two "pots" containing 10 pieces of radioactive cobalt Each piece is about the size of a button and has been "cooked" in a nuclear reactor at the U S Atomic Energy Commission's plant at Oak Ridge, Tennessee The cobalt pieces give off the same amount of cancer-killing gamma rays as would a 3,000,000 volt X-ray source *USIS.*

Ultrasonics to Treat Bone Cancer

Ultrasonic energy, consisting of sound waves too high in frequency to be heard by the human ear is being used experimentally in the United States to treat bone cancer

Such cancers in laboratory animals have been at least partially destroyed by this means, researchers at the Mayo Clinic at Rochester, Minnesota report The application of ultrasonic energy to bone cancers in rabbits has killed an estimated 90 per cent of the cancerous cells in some tests

The main cause of the cell destruction appears to be the heat generated in the bone by the high-frequency sound waves The outstanding feature of ultra-sound is its ability to heat bone selectively in a more effective way than any other known agent *USIS.*

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Young Women Get Training to

BUILD A HEALTHIER RURAL [illegible]

(Continued from p 2)

shared with the state government on a sliding basis so that, by next year, the state government will meet the entire expense.

As I took a tour round the centre and talked to the Chief Instructress, Miss Labanya Rekha Mitra about *the training programme*, I had the feeling that India can confidently look forward to better, healthier, and more vigorous rural homes. All the trainees are young and come *from rural areas*. They appeared to me to be imbued with the zeal to help their sisters in villages to get on the road to a better living.

And to fit themselves for the strenuous task that lies ahead, the trainees have to undergo a rigorous daily schedule. Rising with the break of dawn at 4 30, they fill a busy 17-hour day, during which they are taught the rudiments of diet and nutrition, housing and home management, maternity and child care, health and sanitation, clothing and laundry, home science extension, arts and crafts, and agriculture. Working with their hands, without any help, the trainees are getting an education in home-making.

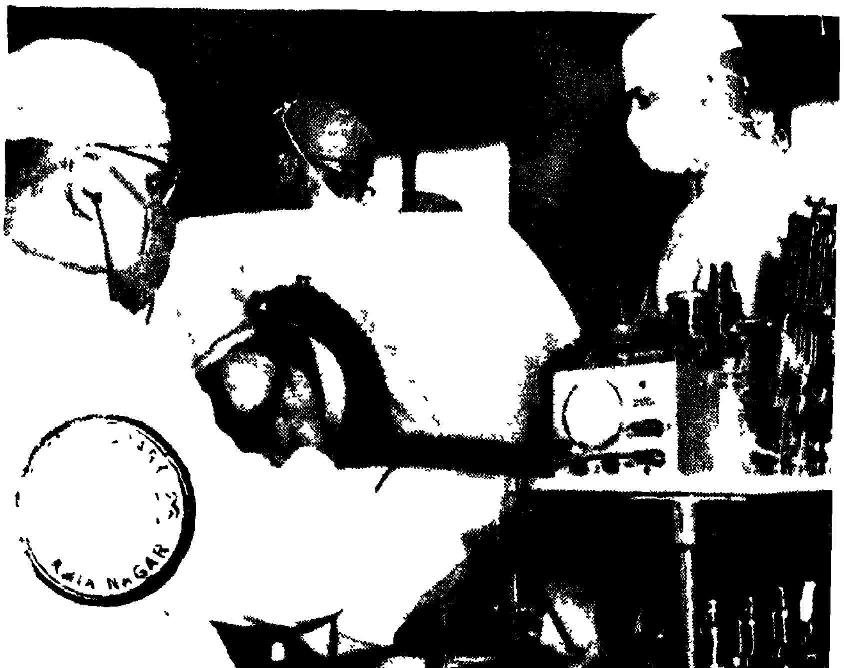
Equal stress is laid on practical work. Two villages nearby, with a combined population of about 2,700, provide enough scope for field work for the trainees. Village women were persuaded to send their children to schools. The centre itself runs a morning nursery where approximately thirty-five village *children come. Each trainee* has personal charge of one or two tots. They follow up the nursery work by visits to their respective homes.

Initially, great difficulty was encountered in approaching the tradition-ridden village women. They, with the usual rural reticence, were cool toward the trainees. But when the children in the village were encouraged to organize themselves into groups to conduct recreational literary and community activities, they thawed a little. "Kabigan" or song festivals were organized to which the woman folk were invited. By becoming participants themselves, the rural women became interested in the programme. The rest was easy.

Now as one takes a walk through these two villages, one can notice the cleanliness, both outside and inside the homes. The smokeless "chullah" has been adopted by a number of families. The Barapalli type of latrine (so named because it was developed by the American Friends' Society at Barapalli), which is hygienic and cheap, is being increasingly utilized. Soap making and food preservation have caught the fancy of the village housewives. More and more kitchen gardens are being grown, not only supplementing the diets but providing a variety in their meals. The traditional "alpana" decorations, fallen into disuse, have been revived through the efforts of the trainees.

What the trainees have been able to achieve in these two villages bodes well for the future of rural India. For I sensed pride in the people and saw that they were not satisfied with what they had. They wanted a better life and were willing to work for it.

By 1961 when the Second Five Year Plan ends, this training centre along with others, will have turned out 5,000 gram sevikas who will cover 250,000 villages with a population of 165 million. Thus India's rural economy will be strengthened by enlightened rural families.



USIS

NEW HEART INSTRUMENT SAVES LIVES An anaesthetist (left foreground), watching the dial of a Cardiac Monitor on a nearby table, has a continuous "picture" of a patient's heart activity during surgery. This instrument which records heart action even when pulse is not detectable, enables doctors to start resuscitation in an emergency and eliminates unnecessary opening of the chest for cardiac massage.

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The Oriental Watchman and

Herald of Health

A Magazine for Home and Happiness

:TOBER
1957



C. A. R. E.

Helps India Overcome

Poverty, Illiteracy and Disease

Courtesy U.S.I.S.

ONCE upon a time a small boy in Decatur, Georgia, was having a birthday It was his sixth, and his family and friends bestowed the gifts usual and traditional to the occasion mostly toys, books, and the like He also received cash amounting to $10 (about Rs 47 75)

The boy had heard his father talk about India, which he had visited just a year before His father had told him that little boys in Indian villages, though full of mischief and curiosity, lacked some of the basic necessities of life He wanted to send the money to some Indian boy So he gave his father the $10 with his request The father handed it over to CARE, or the *Co-operative for American Remittances Everywhere*, knowing that his son's desire would be met

Half way around the world, in a corner of southern India, the Rama Krishna Ashram at Kayangulam was crowded to overflowing Milk powder and butter-oil were being distributed free

Miles away in Chilakapalli, a small village in Andhra, a group of adults was busy poring over books In another part of the village some women were working a sewing machine, turning out children's garments

In New Delhi a dark-haired, bespectacled American huddled over a sheaf of papers spread out on the table in his office From time to time he would jot notes on a piece of paper Occasionally he would pick up his telephone and double-check some figures with his secretary

The American working in his New Delhi office was the Chief of CARE in India, co-ordinating the supplies bought from such gifts from the United States to needy areas in India The people of Chilakapalli who had organized themselves into an association to help themselves had received audio-visual aids, books and sewing machines from CARE The milk and butter-oil in Kerala came through CARE as an expression of the goodwill of the American people

CARE was originally created to channel emergency help from individual Americans to friends and relatives in Continental Europe, lying exhausted by the devastation of World War II Representing 22 American voluntary organizations, it soon became evident to CARE that Europe needed a helping hand But, people in the Middle East, Southeast Asia and the Far East were equally in need Age-old poverty, illiteracy, malnutrition and starvation had brought them to the brink of despair With the realization of this need in America, the character of CARE gradually changed Instead of Europe, the letter E came to mean Everywhere

Thus in 1950, under an agreement with the Government of India, CARE began its operations in India Famine conditions in the south and the floods in Bihar and U P necessitated emergency food help in these areas Under a Government of India-CARE agreement, all CARE relief supplies were admitted duty free and free rail transportation for these supplies was provided by the Government

But it was not long before CARE in India realized that beyond the need for emergency food lay the need for other necessities, the renewal of human dignity and co-operation among men They knew that no one wanted to live on charity for ever Some of these needs may appear less tangible, less dramatic than food, but they are nonetheless enduringly significant Their importance to life and peace has led CARE to channel clothing, medical supplies, books, tools, occupational materials and other goods and services to those who cannot otherwise obtain them

To add to the effectiveness of the Indo-U S technical assistance programme, CARE pioneered a broadened concept of packaged aid involving tools, ploughs, technical literature and medical and hospital equipment This new "self-help" programme of CARE has brought new hope to farmers, to rural folk



(continued on p. 36)

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J. B. OLIVER, M.D., D.T.M. Associate Editor

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OUR COVER

New Art would better Nature's best,
But Nature knows a thing or two
—Owen Seaman.

Photo. Vidyavruta

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Minute Meditations

BUILDING SHATTERED HOUSES

D. A. Delafield

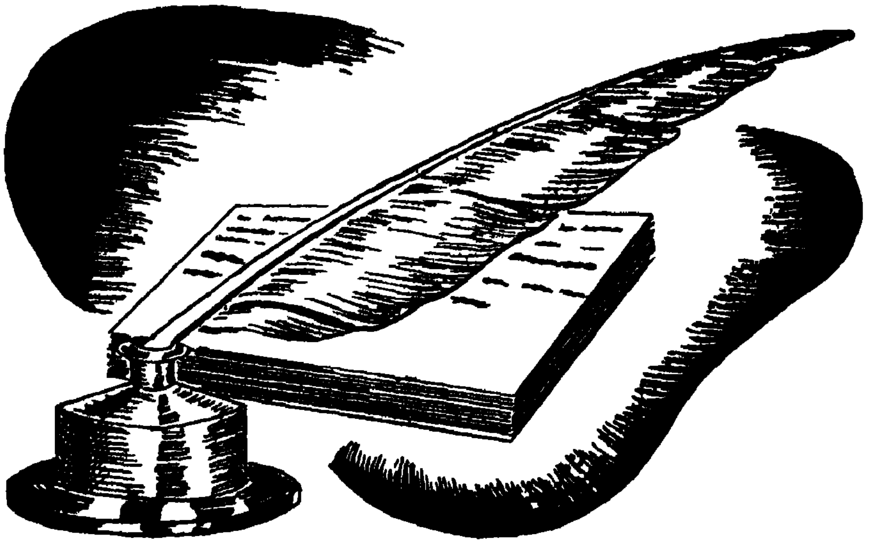
THE phone rang, and a young business man picked up the receiver. It was the boss calling, and Edward was to come into his office at once. He had been expecting this. News had leaked through to the effect that his department of the business was scheduled to suffer some severe cut-backs.

The general manager was kind to him. He had done faithful work for the institution. He was not going to be dropped, but a peculiar situation beyond their control had altered the company's plan for his work, and his department was to be—

Well, Edward expected to be told that serious changes were to take place, but he didn't expect this. His department was to cease its business entirely as of December 31 of the current year! It was a terrific disappointment and a real crisis in the life of this youthful executive, but he refused to be mastered by these trying circumstances. He calmly questioned his employer, and was able to gather facts that he knew would help him to build a strong foundation for an entirely new enterprise out of the broken fragments of the old.

When later that day he told his wife and family about the change, a few warm tears were shed, but not for long. Edward still had a job and that was something, though it seemed he had wasted much valuable time building the department. But really, had he? After thinking the matter over he decided that it was time well spent, and he was a better man for it. Now there was the future to challenge him. He would show

(Continued on p. 29.)



THE EDITOR SAYS

"MATHEMATICAL PROGRESSION"

EVERYONE in India is aware of the problem that she is facing in connection with what is commonly called the Second Five-Year Plan Every thinking person is, or should be, conscious of the many problems that are involved and the reasons for the difficulties in which the state finds itself at present.

India is a comparatively new country in the sense that she is responsible for her own progress and development. It is only ten years since independence was granted to this great land and in that time enormous progress has been made. The difficulty is that though much progress has been made, still there are many who expect more than it is humanly possible for any government to give them in so short a time. Such people have a tendency to look at other countries and say: "Why is it that India is not doing as America is doing, or as Russia is doing, or as England is doing?" They fail to recognize that these countries to which they look are countries who have had many years in which to develop their present industrial and economic status. And they fail to realize that India is in the clutches of one of the most monstrous problems that has ever faced any people on earth.

Let us think a bit about this problem. It is estimated that about one out of every six people in the world is an Indian. That means that 15 per cent of the world's population is comprised of Indian citizens But, while India has 15 per cent of the world's population, she has only 2 4 per cent of the total world area Out of that more than one-third is lying uncultivated at the present time. But this is not the major problem. The fact is that India's population is increasing enormously each year. From 1941 to 1951 the increase in population was 42.06 million people.

It is because of this stupendous increase in population that India is facing her food and financial crisis at the present time. It is true that India has many problems. But we contend that the greatest problem in the land is the problem of population.

Some people, in talking with me, have been so ridiculous as to suggest that the reason for the difficulties in India today, is the great advance along the lines of health. They have contended that if modern techniques of hygiene and sanitation had not been introduced millions of people would have died off who are now living and consuming food and occupying positions in work. They maintain that if vaccination and inoculations had not been introduced, cholera, typhoid, plague and the other scourges of tropical lands, would annually make away with millions of people and thus keep down the population. Such suggestions are not only inhumane but most inane from every point of view.

It is true, of course, that as a result of better standards of hygiene and sanitation, as a result of the perfecting of various inoculations and vaccines, thousands upon thousands of lives are saved every year--perhaps we might even say millions of lives are saved every year. And looking at the picture from a very selfish point of view, perhaps it might have been best if these things had not been. Unless, of course, it would have been our family that was non-existent! That would always put things in another light, wouldn't it? It seems that it doesn't matter what happens to the *other* family, to the *other people's* children So far as our *own* children are concerned we are very anxious that they have every opportunity, that things be as hygienic and as sanitary as possible, that they have the advantage of the vaccines, of the inoculations, of these other preventive measures, so that their lives may be spared.

I was reading an article by Hilton Brown which appeared in the *Hindu Weekly Magazine* of Sunday, August 25, 1957. He was discussing this problem of "The Terrifying Increase in Population in India," and we might add that this increase in population is not limited only to India. The situation being created by population increases is just as critical in Ceylon and Burma and Pakistan and the other nations of south and south-

east Asia, as it is here in India. Mr. Brown suggests that thirty years from now, there will be sixty million more people in India than there are today. He says that this is "not guess work, but inescapable mathematical progression." He then makes the most startling statement: "In order that things at the end of those thirty years may be no worse than they are now, we should have to kill off two million (*an additional two million*) every year. Who, or what is going to do this? The answer to the first is 'nobody' and to the second 'no force known at present.' Under modern conditions no famines, no known pestilence, no war, not even hydrogen bombs could begin to compete with it. It is a dreadful thing to say, but we want sixty million people killed off tomorrow—or the day after, a hundred million would be better; there would then be a brighter hope of really doing something for the remainder. But it isn't going to happen." This statement by Hilton Brown is not a reflection of his personal desire or of the desire of any individual or group of individuals. It is simply a statement of the fact concerning the situation that faces the peoples here in these lands.

For every child that is born and who lives, food must be provided. Clothes must be obtained. Services of various kinds have to be maintained. A given acre of land is capable of producing only a given amount of food. A given quantity of cotton is capable of producing only a certain amount of cloth. A nation possessing a certain amount of land which can be cultivated can be expected to cultivate that land to the maximum capacity and beyond that it must rely upon imports. But the population of all countries is increasing and the possibility of importing food is going to become more and more difficult as years go by. It is going to become necessary for each land to be absolutely self-sufficient so far as meeting the needs of its own population is concerned. This will mean, of course, more and more plans and more projects and more and more scientific use of the facilities that are available—up to a certain point. Beyond that point it is impossible for man to progress and to provide the amenities of life. Then what?

In the past, many major wars have been waged because of economic difficulties and because of population problems. I think that all the world recognizes that the primary reason for Japan's entry into World War II was the food and population problem. Japan, if she was to continue to exist as she was existing, needed to have more territory. She needed more area in which to establish her economy and the only way she could obtain it was through conquest.

Economically speaking, population control is of vital importance also in order that the standard of living in a country be maintained. Suppose that a family today has an income of Rs. 400 a month. There is the husband and the wife as a young married couple. They have, to spend on themselves, a total of Rs. 200 each. But now, suppose in the next two or three years, their family increases and they have two children. The result is that there are now four individuals to be supported by that Rs. 400. This means that that family now has Rs 100 per month to spend

(Continued on p. 6.)

RIGHT START FOR BABY

Agnes Tieck, R.N.

LIVING with your baby should be one of life's most rewarding experiences. It will be if you are confident in your knowledge of what to do for him.

You will receive a lot of advice from well-meaning friends and neighbours telling you what you should do. Your baby may be different. What was right for their babies may be wrong for yours. Rely on the advice of your baby's doctor, and your own good common sense will tell you what is best for the baby.

The room must have plenty of fresh air the year round, but keep the baby out of a draft.

Breast feeding is best for him and you too. You will be spared the never-ending chore of preparing feeding formulas. You will be happier if you nurse your baby and he will progress better on Mother's milk.

Some babies do not enjoy a bath. They are afraid of water. They should be allowed to get used to the water gradually and never be forced into the tub. Be careful not to get soap in the baby's eyes or nose.

Play is more important than many people realize. Your child expresses his thoughts, develops his muscles, and gains self-reliance through play. If you watch while he plays with other children, you will learn to understand him better.

Dress him in play clothes and have him play with other children, so that he will learn to adjust himself to the demands of others. Teach him to share happily.

You may be fortunate enough to

(Continued on page 13.)

THE STUDENTS' GUIDE

IN SEARCH OF YOUR TALENT?

BHABES CHANDRA CHAUDHURI

I USED to wonder what my talent was. Most people seem to know what theirs is. Why couldn't I?

A friend I know has such a lovely voice! Her talent is so easy to recognize. When she opens her mouth the beauty and strength of her voice reach out and speak to the soul in a language apart.

Another friend of mine is an artist. He captures beauty and puts it on the canvas. His talent stands out like a beacon light. Many people stand or pause for interminable lengths of time in front of his work. It needs no explanation! It, too, speaks for itself!

A neighbour of mine is a lecturer. He is a wise philosopher and as you listen to him speak on our ancient lore and traditions or other literature of the world you can feel his talent, as it were, reaching out and quite irresistibly enveloping you!

As I thought of these wonderful people and their great gifts, the Bible story of the three men and the talents came to my mind.

You remember how each was given a portion and all but one did something with the amount he received.

That one buried his because he was afraid of losing it. He didn't bother trying to help someone with it, or investing it, or just putting it to work. He buried it because he was a materialist. He had to know it was *there* so he could see it if he wished.

He thought that in order to have something he must be able to see it with the eyes, feel it with the hands or hear the sound of it with the ears!

Surely all of us have received talents. There is no one who lacks a talent! Some of us are born with these talents so pronounced in our make-up that we merely have to put them to use. Others of us must do a little work. We must all delve deep and try to find our true self, then our talents will come forth and shine.

At last, I found my talent! It is not in being able to sing, or in being an artist; or in drawing people closer together in a crowded hall! My talents are not so magnificent, but, nonetheless, they do exist! I have the power to give a smile; to say a kind word; to help my brother; to press a soothing hand to a burning brow; to succour a soul whom hunger sends from door to door, to comfort the sick and shelter the homeless.

Each day I am given the glorious opportunity of using my talents all over again through serving, loving, giving, thinking, doing good, being kind, and always receiving in kind in full accord with the saying of St. Francis,

"It is by giving that one receiveth;

It is by forgetting . . . that one findeth!"

Have you found your talent?

THE EDITOR SAYS: "Mathematical Progression"

(Continued from p. 5.)

on each person. But, suppose that two more children are added to that family, and two more children. Now there are eight and and the family has a total of Rs. 50 per month to spend on each member of the family. As the family increases in size the amount of money available each month to spend upon the education, the clothing, the feeding of each member of that family decreases. So it is with the population of the country as a whole. There is a certain amount of money available for use in the nation and as the population increases, the proportion of that total amount of money per individual decreases.

We have used Rs. 400 as an estimate for the family on a monthly basis. But we recognize that this estimate is far in advance of that which is the actual income or measure of available cash per family in India at present. We recognize that the average family does not have an income anywhere near that figure. It is hoped that in the future the standard of living may be raised beyond what it is now. The larger the family the greater the economic responsibility that rests upon the parents. The larger the population the greater the economic responsibility that rests upon the governing body of that nation. Every family has a desire to achieve happiness and prosperity. It is logical. It is natural. It is reasonable. The same is true of every nation. For this reason, every effort is put forth that the family or the people of the nation may be healthy; that they may be wise and that they may have the desired wealth. The achievement of health, wealth, and education are possible

in any given family or in any given community or nation provided the population does not expand beyond the economic limits of reason and sensible development. For example, if a family is composed of the father, the mother and two children, it is possible for the father and the mother and the two children to improve their conditions as time goes on But if the family increases, then the possibilities of advancement and progress for each individual in that family is decreased. It is possible for the standard of living to be raised in a family, in a community, in a nation but only as it is possible to control the number of members in that family, community or nation.

Perhaps this discussion will throw the problem of family planning into a little different light from that in which it is ordinarily considered, but we believe that it is a most logical basis for a consideration of the problem of family planning. Family planning is not alone important for the preservation of health in the home and the maintenance of good standards of living, it is essential for the maintenance of the national economy. The real basis of family planning or population control is that the household budget or the national budget be so balanced and adjusted as to accommodate every item of expenditure within the available income. This would mean limiting the family according to one's means and resources. It is wise planning to produce only as many children as the father and mother are able to support and educate. It is wise planning for the country to educate the people so that they may intelligently plan their families and adequately provide for them so that they will develop into healthy, well-educated, profitable citizens of the state. The present population trends are due to ignorance and sinful indulgence of sensual appetites rather than to any purposeful planning or self-control.—L. J. L.

DON'T FORGET SICK FRIENDS

Bea Reese

THE little things in life can grow to mammoth size during illness Every card, flower, gift, and visit will help to speed recovery. By these remembrances you can express sympathy when sickness strikes a friend In what other way can you contribute to the needs of a sick friend?

As I write this article I am a patient in a large, modern hospital Here everything is done for the comfort and well-being of patients Yet as I look about the spotlessly clean room I marvel at the cheerfulness that thoughtful friends have brought to my bedside On the window sill is a plant with a dozen or more gay yellow blossoms There's a pert pink swan vase with a new green ivy plant tumbling over its side A clever colleen doll with an arm bouquet of four-leaf clover stands near the get-well cards folded over the slats of the venetian blind There are handkerchiefs, books, flowers, magazines, and a "sunshine box" filled with one-a-day gifts

Too often we think, "If I can't send more than a card, I won't give anything" That's where our thinking is wrong To a well person a card is sometimes insignificant, but to one who is ill it is a ray of sunshine, an assurance that a friend hasn't forgotten

If you have never known sickness, you may not understand the importance of these small expressions of kindness Have you ever wondered what you would do if you were confined to bed for six weeks? At first you might be too ill to know or care about who comes or goes. But later most of your time would be spent in convalescence That is when the hours drag You look at your watch at one o'clock, an hour later so it seems - you look again, and it is only 1.15 No, time doesn't fly on fleeting wings when you stay in bed the clock around, each of its twenty-four hours

When your health improves and strength returns, you do much reading and writing But even these diversions are limited, and the rest of the time you do nothing but think It is too easy for a convalescent to turn his thoughts inward, and it doesn't do him any good The patient who has visible remembrances from friends has something to hold his attention and help him forget self

Each gift will recall happy associations of the past and inspire new plans for the future You pick up a book that a friend left on your table As you turn to the page marker your mind drifts leisurely back to the lake cottage where the two of you spent a week together last summer You smile as you recall the morning you fell out of the boat, you remember how you stood up to look at an object of interest in the water Your friend tried to warn you about the bottle rolling under your foot, but too late The next instant you were in the lake As your smile turns to a chuckle your muscles automatically relax, the blood has a chance to circulate more freely, and you have taken just one more step toward recovery

On the back of one card a friend has written, "The next time I come up I'll bring the pictures we took

(Continued on p. 28.)

Never Give Up HOPE

J. DeWITT FOX, M.D.

IT WAS Dr. William T. Buchanan's night on call for the emergency room. And being Saturday night, it held no promise of being quiet. About eleven o'clock the telephone rang.

"Better come right over," the voice of the nurse at the other end of the line said. "An auto accident out on Highway 16 is being brought in. The ambulance driver called ahead so we would be ready.

As Dr. Buchanan drove to the hospital, he could hear the wail of sirens coming nearer, and a few minutes later, the flashing red lights came into view. Nimble attendants wheeled a severely injured young man into the bright lights of the emergency room.

The room was a-buzz with nurses, interns, and specialists. The neuro-surgeons had been called first to be on hand should a brain hæmorrhage or skull fracture need immediate attention. Dr. Buchanan, the oral surgeon, was called because of the possibility of fractures about the mouth and face.

General surgeons were on hand to sew up cuts, and orthopœdic specialists to check broken bones.

As the patient was examined the doctors shook their heads—he'll never make it. He was in shock, and his blood pressure was so low it could hardly be taken. The nineteen-year-old youth, who but a few short minutes before was a handsome, upstanding young man, lay still and white.

Although considering the case almost hopeless, the neuro-surgeons got busy, and after checking him over, said the fractures and cuts could wait until he was out of shock. They would wait till morning before doing anything.

Few thought the boy would last till morning, for he was in coma. But he did. They put him to bed. He lay in coma day after day, being fed intravenously and through a feeding tube in his stomach The father sat beside his son's bed night and day. "I can't see how that boy can make it," he would tell the doctors on their rounds.

Days, then weeks rolled by, and still the boy was unconscious. His arms and legs began to waste from disuse and his weight dropped from 146 pounds to nearly 100. But the neuro-sugeons would say each day, "Don't give up hope."

As Dr. Buchanan told me the story he said, "Dr. Edgar A. Kahn, professor of neuro-surgery, and the other neuro-surgeons had a 'never give up' philosophy. As one said, 'Who are we to say there is no hope, and just give up and let the boy die? Only God has that right As doctors, our only duty is to preserve life as long as it is within our power.'" But many a hospital worker wondered whether it was worth the hope, as the boy lay there in a vegetative state, unconscious, just breathing, eating only by tube

But one morning, five weeks after the accident, a flicker came to his eyelids. Slowly he opened his eyes

and looked at his father. At first he recognized no one, but in a few days his memory returned. He began to gain strength slowly. His muscles became firmer, and he gained a little weight. It was not until seven months had rolled by that all his injuries had healed.

The reward for never giving up hope came at last. Dr. Buchanan and the neuro-surgeons were in the elevator in the University Hospital at Ann Arbor, Michigan. A nineteen-year-old boy greeted them. He was a robust, handsome lad, full of vigour, with a sparkle in his eyes and a clear speaking voice. With a start they realized that this was the boy destined to die—the boy to whom hope had restored life. He stood a living testimony to the miracles of modern medicine and an indomitable faith in the healing power of God.

Each doctor in that elevator thought back to the night he came into the hospital, and silently shuddered at the thought, "What if they had given him up? What if they had said, 'It's no use—he'll never make it'?"

The faith of the doctors attending the boy was rewarded. Every ounce of effort they had put forth, without any count of the cost, was worth the time and thought it required.

The faith of the father of the boy was rewarded. He had stood by the doctors throughout the weeks of uncertain outcome. Never once did he allow himself to lose hope that somehow the boy would pull through.

As he sat through long black nights and worked through tense, dreadful days, he continued to believe that a miracle would happen. When it did come about, he knew that all the sorrow of the many weeks of waiting was not lost effort.

To see his son open his eyes, gain back his health, and fight back to vigorous youth was one of the greatest joys he could experience.

When a life is in the balance, what price do men lay on hard work, grinding vigils, or continued watchfulness? No cost is too great when it may save a human life.

So long as a spark of life remained in the boy, the doctors stayed at the task. Refusing to believe the signs before their eyes, they continued in grim determination to outlast desperation and discouragement. Not once did they fail in giving every support to a fighting human being.

No matter what your illness or calamity, never give up hope. Hope may seem a thin thread, but it carries all the dynamic power of the universe. If coupled with prayer and the intelligent work of physicians, it can bring life where there may appear to be none. Should the illness seem absolutely hopeless, never give up hope. Cancer has been cured, brains bruised by accident have come back to normal, limbs twisted from arthritis have been rehabilitated, and paralyzed patients have returned to useful life. So why should you give up hope?

YOUR CHILD'S VISION

THE matter of giving your child a good visual start in life is not so simple as it may seem, says the Better Vision Institute. Seeing problems are not usually obvious, and it is only in extreme cases that they can be easily detected by a parent, a teacher, or the child himself. When the trouble finally comes to light, there is often need for more drastic steps than would have been required if it had been discovered sooner.

It is important to see that your youngster has a complete eyesight examination before he enters school. He should have one much earlier too, if he gives any hint of special problems.

Here are a few general rules that will help prevent harm to your child's vision during infancy:

1. Don't allow glaring lights or direct sunlight to strike the baby's eyes, and don't let him look directly at the sun.

2. Don't hang toys or rattles over his crib or carriage.

3. Don't dangle objects close to his eyes to amuse him. This might produce a smile, but only as a grimace from the discomfort of turning his eyes in; if you were to do it too often, the habit might contribute to crossed eyes. When he is ready to organize visually, he will choose the safe and natural method of moving his hands and feet and studying them.

4. Keep a close watch on his general health.

5. Consult an eyesight specialist if his eyes become inflamed, for this condition could be a sign of some ailment that might cause serious damage.

Between babyhood and school age, follow another set of rules:

1. Provide good light for your child's indoor activities.

2. Be sure his books and games have large print and pictures.

3. Don't allow him to develop poor posture habits, such as head tilting, turning one eye closer to the object viewed, holding near-point work too close, or reading while lying with chin in hands, supported by elbows.

4. Encourage outdoor play that uses distant vision.

Proper preventive and corrective measures taken in early years may save your son or daughter from trouble later, says the Institute.

Extremes in Diet

ELLEN G. WHITE

NOT all who profess to believe in dietetic reform are really reformers. With many persons the reform consists merely in discarding certain unwholesome foods. They do not understand clearly the principles of health, and their tables, still loaded with harmful dainties, are far from being an example of [true] . . . temperance and moderation.

Another class, in their desire to set a right example, go to the opposite extreme. Some are unable to obtain the most desirable foods, and instead of using such things as would best supply the lack, they adopt an impoverished diet. Their food does not supply the elements needed to make good blood. Their health suffers, their usefulness is impaired, and their example tells against rather than in favour of reform in diet.

Others think that since health requires a simple diet, there need be little care in the selection or the preparation of food. Some restrict themselves to a very meagre diet, not having sufficient variety to supply the needs of the system, and they suffer in consequence.

Those who have but a partial understanding of the principles of reform are often the most rigid, not only in carrying out their views themselves, but in urging them on their families and their neighbours. The effect of their mistaken reforms, as seen in their own ill-health, and their efforts to force their views upon others, give them a false idea of dietetic reform, and lead them to reject it altogether.

Those who understand the laws of health and who are governed by principle, will shun the extremes, both of indulgence and of restriction. Their diet is chosen, not for the mere gratification of appetite, but for the upbuilding of the body. They seek to preserve every power in the best condition for highest service to God and man. The appetite is under the control of reason and conscience, and they are rewarded with health of body and mind. While they do not urge their views offensively upon others, their example is a testimony in favour of right principles. These persons have a wide influence for good.

There is real common sense in dietetic reform. The subject should be studied broadly and deeply, and no one should criticize others because their practice is not, in all things, in harmony with his own. It is impossible to make an unvarying rule to regulate everyone's habits, and no one should think himself a criterion for all. Not all can get the same things. Foods that are palatable and wholesome to one person may be distasteful, and even harmful, to another. Some can not use milk, while others thrive on it. Some persons cannot digest peas and beans; others find them wholesome. For some the coarser grain preparations are good food, while others can not use them.

Those who live in new countries or in poverty-stricken districts, where fruits and nuts are scarce, should not be urged to exclude milk and eggs from their dietary. It is true that persons in full flesh and in whom the animal passions are strong need to avoid the use of stimulating foods. Especially families of children who are giv to sensual habits, eggs should n be used. But in the case of perso whose blood-making organs a feeble,—especially if other foods supply the needed elements can n be obtained,—milk and eggs shou not be wholly discarded. Great ca should be taken, however, to obta milk from healthy cows, and eg from healthy fowls, that are w fed and well cared for; and t eggs should be so cooked as to l most easily digested.

The diet reform should be pr gressive. As disease in anim increases, the use of milk and eg will become more and more unsaf An effort should be made to supp their place with other things th are healthful and inexpensive. T people everywhere should l taught how to cook without m and eggs, so far as possible, and v have their food wholesome a palatable.

The practice of eating but t meals a day is generally found benefit to health; yet under sor circumstances persons may requ a third meal. This should, howev if taken at all, be very light, a of food most easily digest



"Crackers"—the English biscuit—or zwieback, and fruit, or cereal coffee, are the foods best suited for the evening meal.

Some are continually anxious lest their food, however simple and healthful, may hurt them. To these let me say, Do not think that your food will injure you; do not think about it at all. Eat according to your best judgment; and when you have asked the Lord to bless the food for the strengthening of your body, believe that He hears your prayers, and be at rest.

Because principle requires us to discard those things that irritate the stomach and impair health, we should remember that an impoverished diet produces poverty of the blood. Cases of disease most difficult to cure result from this cause. The system is not sufficiently nourished, and dyspepsia and general debility are the result. Those who use such a diet are not always compelled by poverty to do so, but they choose it through ignorance or negligence, or to carry out their erroneous ideas of reform.

God is not honoured when the body is neglected or abused, and is thus unfitted for His service. To care for the body by providing for it food that is relishable and strengthening is one of the first duties of the householder. It is far better to have less expensive clothing and furniture than to stint the supply of food.

Some householders stint the family table in order to provide expensive entertainment for visitors. This is unwise. In the entertainment of guests there should be greater simplicity. Let the needs of the family have first attention.

Unwise economy and artificial customs often prevent the exercise of hospitality where it is needed and would be a blessing. The regular supply of food for our tables should be such that the unexpected guest can be made welcome without burdening the housewife to make extra preparation.

All should learn what to eat and how to cook it. Men, as well as women, need to understand the simple, healthful preparation of food. Their business often calls them where they can not obtain wholesome food, then, if they have a knowledge of cookery, they can use it to good purpose.

Carefully consider your diet. Study from cause to effect. Cultivate self-control. Keep appetite under the control of reason. Never abuse the stomach by overeating, but do not deprive yourself of the wholesome, palatable food that health demands.

The narrow ideas of some would-be health reformers have been a great injury to the cause of hygiene. Hygienists should remember that dietetic reform will be judged, to a great degree, by the provision they make for their tables; and instead of taking a course that will bring discredit upon it, they should so exemplify its principles as to commend them to candid minds. There is a large class who oppose any reform movement, however reasonable, if it places a restriction on the appetite. They consult taste instead of reason or the laws of health. By this class, all who leave the beaten track of custom, and advocate reform, will be accounted radical, no matter how consistent their course. That these persons may have no ground for criticism, hygienists should not try to see how different they can be from others, but should come as near to them as possible without the sacrifice of principle.

When those who advocate hygiene reform go to extremes, it is no wonder that many who regard these persons as representing health principles, reject the reform altogether. These extremes frequently do more harm in a short time than could be undone by a lifetime of consistent living.

Hygienic reform is based upon principles that are broad and far-reaching, and we should not belittle it by narrow views and practices. But no one should permit opposition or ridicule, or a desire to please or influence others, to turn him from true principles, or cause him lightly to regard them. Those who are governed by principle will be firm and decided in standing for the right, yet in all their associations they will manifest a generous, Christlike spirit and true moderation.

The Place of Potatoes in Our DIET

SAHIB SINGH AHUJA

THE origin of potatoes is still shrouded in mystery. It is said the plant was first discovered growing on the Andes range in South America in the year 1538.

Someone carried the first potato to Europe in the 1580's. From Spain it went to Italy and by 1588 it reached Vienna. It is wrong to say that either Sir Walter Raleigh or Sir Francis Drake brought it to Ireland from Virginia, as it has been proved that potatoes did not grow in Virginia in their time.

Like all new foods the potato had to overcome the prejudices of the people. Marie Antoinette, the Queen of France, wore its blossoms in her hair. Scotch divines thundered against it, because it was not mentioned in the Bible and as such it was the Forbidden Fruit, so they said, that caused Adam's Fall.

Frederick the Great planted potatoes in the Lustgarten and his grandson threatened to cut off the noses of all who would not plant them. A public dinner was given in Paris by a French noble wherein the whole menu consisted of potatoes cooked in various ways.

Through all this fanfare, the potato gradually came into its birthright because poor people of northern Europe found that as there was not much else to eat, potatoes would keep body and soul together.

In India the pioneer work in the introduction of this crop was done by the English. It is said that the potato came to our country originally from the Cape of Good Hope. Its cultivation on the hills north of Dehra Dun was started by Major Young when Mussoorie was indicated on maps under the name of potato garden. The quality was afterwards improved by Captain Townsend and by about the year 1839 potato cultivation became generally popular in the plains and on the hills.

Potatoes were cultivated during the years 1772-85 when Warren Hastings was the Governor-General of India. It is said that a basket of potatoes was occasionally sent by Warren Hastings to the Governor of Bombay and this was considered as an acceptable present. On receipt of the basket, the members of the council were invited by the Governor to dine with him and enjoy the rare vegetable.

The potato is called by various Indian names such as *alu, batata, bilaiti, urulgudda* and is cultivated more or less in all parts of India. It was practically unknown in our country a century ago but today it is probably the most extensively used of all the vegetables. The versatile potato is often cooked in combination with other foods and vegetables and its mild flavour makes the combination very palatable.

In the beginning, when the potato was first introduced, the orthodox Brahmins objected to its use, just like their Scotch counterparts, due to its not being mentioned in the holy scriptures. But the prejudice against it disappeared gradually and now it is used by all classes. It is now one of the root crops which are included in the list of articles to be eaten during a fast.

Percentage Composition

Water	74.7
Protein	1.6
Fat	0.1
Carbohydrate	22.9
Minerals	0.6

Potatoes have been adjudged by the Health Committee of the League of Nations (now defunct), as an important protective food and they recommend a more liberal intake of potatoes in the diet. They are a valuable source of iron and rich in vitamin C and contain more vitamin B than milled cereals. Potatoes have the peculiarity among vegetables of retaining a high proportion of vitamin C after they

are cooked. They provide more easily available calcium and phosphorus than the cereals. They are rich in potassium; and as potassium has greater affinity for chlorine than sodium, it readily transforms much of the sodium chloride of the blood into potassium chloride and this means the loss of sodium chloride to a great extent. Hence it is necessary that sufficient common salt should be added to a potato diet.

Due to the presence of mineral salts in abundance and also vitamin C, potatoes are a good protection against scurvy. The mineral salts together with the little citric acid present in potatoes help to retain the acid-base balance of the blood.

Potatoes are fairly rich in a starch which is considered to be the most easily digestible of all starches. This starch is not acidifying, and does not show any predisposition to cause dental diseases like the starches of cereals, or common sugar. The small amount of protein it contains is considered to be a good protein.

Dehydrated potatoes, concentrated as they are, possess much more nutritive value than fresh potatoes, weight for weight. It should be remembered that the nutritive value of potatoes very much depends on the quality of the soils and seeds and also the methods of manuring and cultivation

Potatoes contain an alkaloid but in such a small quantity that it is practically harmless. It can be extracted, and even destroyed by boiling. The alkaloid is present in large amounts in sprouting potatoes. Old potatoes should be boiled in their skins for making the best use of the protective elements they contain. New potatoes contain more vitamin C and more sugar but less starch than old potatoes. Potato leaves and flowers are more or less poisonous.

Potatoes are not only nutritious but also a crop of economic value, as it is estimated that an acre of land under potatoes can support a larger number of people than an acre of land under wheat or rice It is found that an acre of land under potatoes yields about fifty maunds while an acre of land under wheat or rice yields about ten maunds.

The calorific value of one-hundred grammes of potato is in the neighbourhood of one hundred. A variety of palatable dishes can be prepared from potatoes without much cost.

RIGHT START FOR BABY

(Continued from p 5)

have a yard of your own with a swing and teeter-totter. Permit him to climb and to turn somersaults Let him discover the pleasure of sharing his toys with others. Children have a great deal of energy that needs to be used in active play

The ability to make friends begins in childhood. Help your child to make desirable friendships. Have him invite the children he likes to his home, and see that they have a good time Be courteous to the children, and make them feel happy and comfortable Speak well of your child's friends to him By being a good friend to him yourself you will teach him the real value of friendship

Your child has an abundance of energy, and you must direct it in the right way When he is too tired or does not have enough variety in his occupation, he will get restless and irritable Do not discipline him for this Let him rest or change his activity Let him lie down for a while.

Children who have plenty of sleep and whose meals are given on time have fewer tantrums than those who are not kept on a regular programme. Hunger and fatigue are the most common causes of anger.

A child will also show anger by having temper tantrums if he is interrupted to be fed or dressed It is impossible for a two-year-old child to put into words how he feels about some things he dislikes to do. Perhaps he has started to build a house and wants to finish it. His mother takes him away from what he is keenly interested in If she is thoughtful and gives him some warning first, she may avoid a scene. To prevent conflict, make your request interesting by saying, "We have a new pink towel to dry our hands with today Let's put dolly to bed "

Early in life the child has a special feeling for those who care for him. As a little baby he needed only short periods of love and affection He slept most of the time As he gets older he is more aware of people He will want to be talked to and caressed by his parents

If neglected, a child will show great envy toward another child Make special efforts to prepare him for the coming of a new brother or sister With all the extra work and excitement, it is easy to neglect giving the older child as much attention as in the past. When the mother is busy with the baby, the father may step in and form a new relationship with his son Helping Father with tasks around the house will be considered a joy. The mother may hold the child on her lap and read to him while the baby is asleep Assured of his parents' love, he will adjust happily to brother and sister, and develop equally with them, as is his due

Give attention to baby's welfare early, and he will be assured of balanced growth and preparation for life.

Medicine's New Cocktail

W. ROBERT JACOBSON

MEDICINE'S new cocktail has a hang-over. Not an ordinary one, with headaches and nausea, but one that isn't immediately felt. Produced by a colourless, tasteless, waterlike liquid many thousand times more powerful than ordinary X-rays, this hang-over may prove to be highly beneficial to many more thousands of unrelieved sufferers. This is the new weapon of medical research, the atomic cocktail.

The thyroid, a small butterfly-shaped gland in the front lower part of the neck, often fails in its task. Its function is to take the iodine we get in our foods and change it into thyroxin, a glandular substance that regulates growth, determines our rate of metabolism, and in general is important in maintaining our well-being. Sometimes this gland becomes sluggish and doesn't secrete enough thyroxin. This condition, called hypothyroidism, is characterized by slow metabolism and extreme over-weight. Other times the gland secretes too much thyroxin, resulting in hyperthyroidism. One phase of this malady is goitre, which causes bulging eyes and a dangerous loss of weight. Another and much more dangerous affliction of this gland is cancer of the thyroid.

One of the most striking aspects of cancer is called metastases. Cancerous cells from the mother colony on the thyroid break loose into the blood stream and travel to other parts of the body, setting up new colonies Instead of the one original cancer, through metastases there is the appearance of other growths in different parts of the body. These cancer colonies, although they are cancer, still maintain certain functions of the original thyroid-gland tissue. To a slight degree they still absorb the iodine in the body and attempt to turn it into thyroxin.

Medicine's atomic cocktail in this case is a solution of iodine made radioactive at the United States Government uranium pile reactor at the atomic bomb plant in Oak Ridge, Tennessee. Remembering the original function of the thyroid gland, we can easily see that if radioactive iodine is taken internally it will, like regular iodine, be taken up by the thyroid gland. The radio-activity, which is many times more powerful than X-ray, is delivered to the focal point of the trouble, burning and destroying the gland along with its cancer Once this job is done, it then seeks out other metastatic lesions throughout the body and destroys them. Oftentimes it takes more than one drink to destroy the gland and all the metastatic lesions. Once this is done, all excesses pass out with the urine.

Dosage is extremely important in this type of treatment. Once the

radioactive iodine is administered, its measurement and course through the body are monitored by the Geiger counter. In a typical thyroid cancer case the Geiger counter will show concentrations of radioactivity over the thyroid gland and over each of the metastatic lesions. In determining to what extent the metastatic lesions have spread throughout the body, the technician gives the patient a minimum amount of radioactive iodine and checks the entire body with the Geiger counter. This evaluation mathematically treated with the amount of radioactive substance coming out with the urine and the amount initially given determines what strength the dose should be.

In the case of hyperthyroidism, no metastatic lesions are encountered. It is necessary, therefore, to administer only enough radioactive iodine to destroy a part of the gland. By destroying only a part of the gland, the amount of thyroxin manufactured is diminished and the hypersecretion is corrected

But be cautioned against false hope. Although this treatment is a momentous advance in medicine's battle with cancer, it is not completely effective in all cases. Assuming other factors to be beneficial, radioactive iodine does offer real hope to maladjusted thyroids. If this treatment is used, it often saves the patient from the pain of surgery and prolonged hospitalization.

Growing up with this new field of medicine is a new generation of doctors, who work with Geiger counters and automatic scalers instead of scalpels and sutures. A cure is indefinite, but hope can now be said to be definite. Science is constantly striving and searching to learn everything possible about cancer, not just to minimize its effects, but to eliminate it from the human race. Are radioactive medicines another positive step in this direction?

NEW TREATMENT HITS TRACHOMA

A NEW weapon has just been launched against trachoma, an eye infection, which impairs or destroys the vision of hundreds of millions throughout the world.

It is a new liquid form of Achromycin tetracycline, most recent of the broad-range antibiotics and most effective against trachoma The liquid dosage is important, because it facilitates the main hope of ultimately conquering the disease —mass treatment.

In the most complete campaign against trachoma yet attempted in Japan, where health authorities have been actively working on this major problem, outstanding results were obtained with the new dosage form, as well as with the older Achromycin ointment. Eighty-eight per cent of a total of 969 acute cases in a seaside population centre were fully cured by Professor Shigemi Tamura of Kyushu University Medical School and an associate The project was reported recently in "The Eye, Ear, Nose and Throat Monthly," Chicago.

Comparable results in another test were reported by Dr Yukihiko Mitsui, Professor of Ophthalmology at Kumamoto University Medical School, who enjoys a world-wide reputation as a trachoma expert.

In a recent study in the Mediterranean area, comparing various antibiotics, the liquid form was found to give more effective and quicker results than any other, by Dr V. Tabone, a World Health Organization Trachoma Consultant.

Trachoma is one of the most contagious of all diseases—the reason for the special interest of experts in mass treatment. The virus which produces the infection is transmitted by contact, either direct or through the medium of towels, insects or other objects. Unless others in the same community are successfully treated at the same time, cured patients are ordinarily soon re-infected.

Mass treatment as the solution of this problem, however, has hitherto encountered difficulties of its own The use of ophthalmological ointments, involving touching of the infected areas with fingers and often the tube, in itself led to much re-infection. The liquid Achromycin dosage, applied as drops to the eye without any direct contact, eliminates this obstacle. A product of Lederle Laboratories Division, American Cyanamid Company, New York, it is especially adapted for mass treatment, according to both Mitsui and Kamura, being easier, quicker and cleaner to use.

Symptoms of trachoma start with inflamed, roughened eye-lids and a purulent discharge. When untreated, the later phases bring formation of an opaque film over the eyeball, scarring of the eyes, deformation and drooping of the lids and finally total loss of sight.

Despite the concerted efforts of medical science in the past decade, trachoma remains one of the most widespread and devastating infections One in every six inhabitants of the world is a victim—400,000,000 people—with disastrous social and economic consequences—*Communications International.*

Plastic Surgery for Adults

(Second of Three Parts)

WILMER C. HANSEN, D.D.S., M.D.

Plastic surgery offers many adjustments to correct adults' physical shortcomings.

IT IS unfortunate that in today's competitive society an employer interviewing prospective candidates selects the one who "looks right" for the job. The more the job brings the employee into contact with the public, the more the man's or woman's physical appearance weighs in the employer's judgment.

The universal yearning to look right has long since been misconstrued as an exclusive province of the wealthy. But it is no longer true that only the wealthy can afford plastic surgery. For children and adults, plastic surgery is easily and economically within the reach of all, whether the objective is to correct congenital deformities or deformities acquired through accident or disease.

Let us discuss common cosmetic problems in the adult that are amenable to plastic surgery.

To correct a nose that is definitely humped (probably the most common nasal condition to be corrected by plastic surgery), the surgeon carries out the operation entirely inside the nose, so that there is no scar on the surface He uses special instruments to remove bone and cartilage, and narrows the walls of the nose to a suitable width Some noses need remodelling only at the tips The plastic surgeon can make this adjustment by removing small portions of the cartilage that supports the nasal tip.

Noses having a depression in the middle demand a different form of treatment. The plastic surgeon may correct them by filling in with bone or cartilage grafts

Whether the nose is crooked, humped, depressed, or bulbous, there is a technique to correct it. Rhinoplasty (nose correction) demands more artistic judgment on the part of the plastic surgeon than many other operations Because overcorrection can produce a result almost as unwanted as the original condition, he often takes a number of photographs in order to study the features from all angles before he decides which approach to take. He may even make plaster models so that he can estimate precisely how much bone should be removed.

It is obviously of utmost importance that the type of nose decided on be suitable for the patient's face. A nose that would be suitable for the petite girl would be definitely out of place on a large-boned athletic man.

Most plastic surgeons insist on doing the operation in a hospital. This measure is for the patient's protection, for the facilities are better and the post-operative care is more nearly adequate than in a doctor's office. The patient generally leaves the hospital on the first or the second day after the operation, and the plastic surgeon removes the packs and splints on the fourth day. The swelling and discoloration generally subside within a week or ten days.

The patient contemplating this type of surgery should plan on ten to fourteen days away from work, although many return sooner.

Plastic operations on the female breast may be either functional or æsthetic.

In the first category is the woman who finds that oversized breasts are a physical impediment to her housework or gainful employment. Large, heavy breasts tend to throw the centre of gravity forward. To compensate, the woman finds herself pulling her weight backwards as she walks or works. This adjustment causes the back muscles to remain in a constant state of spasm. In middle age the bone and joints of the back are not so resilient as they once were. The result is low back pain and a state of almost continual fatigue

In such cases a great deal can be accomplished in well-being and improved activity by having the breasts reduced in size The plastic surgeon accomplishes this aim by removing the excess skin fat and portions of the mammary gland, then accomplishes a shifting of the nipple to a new position He not only makes the breasts smaller but also gives them better proportion

Not long ago a 38-year-old woman came into my office complaining that her large pendulous breasts were making her life completely miserable "In all my adult life," she told me, "I don't remember a single day when I haven't been constantly worn out with backache and strain"

It has been only two months since this woman underwent surgery, and her husband claims that she is an entirely new woman "In the old days," he said, "I couldn't get her to go anywhere Now it's hard for me to keep up with her"

On the other side of the ledger, woman endowed with breasts they consider too small are able to have them safely enlarged by way of basic, time-tested procedures

Whether the operation is done to reduce or to increase the size of the breast, it is safe to say that it can be done so that the function of the breast is not affected in any way The nipple and the milk duct are left intact If the patient should become pregnant sometime after surgery, she would be able to lactate and nurse her child in a perfectly normal manner

Rhytidectomy is the term doctors use for the operation of face lifting, for the removal of wrinkles Wrinkles are a natural and indispensable part of our faces Without them our faces would be little more than expressionless masks. In their proper places wrinkles help immeasurably to express our individuality and personality Any facial emotion is made possible by the folds of the skin

But the pull on the skin of the face is constant, and as the years march on, these lines grow deeper and more marked The tired and aging skin collapses at its weakest points, the folds, and a wrinkled face results

A typical candidate for this procedure is the patient who has lost a large amount of weight and is left with large folds of skin Then there is the person whose skin has lost so much muscle tone that the folds and wrinkles are causing him mental distress

Not long ago a prematurely aged schoolteacher came to see me Because she looked ten years older

(Continued on p. 28)



T S Satyan

To look right has been the universal yearning.

VITAMI

A,

VITAMIN	WHERE FOUND	FUNCTIONS IN THE BODY
A	Exists as pre-formed vitamin A in fish-liver oil, milk, fat, and eggs. Found in nature, as the orange yellow *pigment* carotene, which is changed into vitamin A in the body.	Essential for normal growth and development, normal tooth formation, proper functioning of the body, healthy skin and mucous membranes Prevents development of nutritional eye and skin diseases.
B Or Thiamine	Widely distributed *in* nature, especially in the germ of cereals and in the outer layers of whole grains	Essential for normal growth, proper utilization of sugars and starches, normal functioning of the nervous system, maintenance of appetite, normal tone and functioning of the digestive tract. Deficiency leads to serious impairment in the functions of the nervous and digestive systems and ultimately to polyneuritis and beri-beri.
[illegible] Or Riboflavin	Found in a wide variety of plant and animal foods. *It is not destroyed by heat.*	Essential for normal growth and development, and along with other parts of the B complex, for utilization of food energy. Involved specifically in the process of oxidation within the cells of the body. Deficiency leads to skin lesions about the face and mouth, and digestive disturbances
NIACIN Or [illegible]	Found in natural foods in only small amounts.	Essential for normal growth and development. Associated with other B vitamins in utilization of food energy. Deficiency is associated with development of pellagra, which is characterized by a sore tongue, dermatitis, and digestive disturbances.
B_6 Or Pyridoxine	Is stable to heat but not to light Dissolves in alcohol. Is believed to help absorption of fats and proteins.	Essential for normal functioning of nerves. Deficiency causes irritability, and may lead to degeneration of spinal cord or cardiac disease.

T (PART I)

VALUABLE SOURCES	RECOMMENDED DAILY ALLOWANCES	
Fish liver oil	ADULTS	
Butter and cream		5,000 IU *
Whole milk	CHILDREN	
Egg yolk	1 - 6 years	
Yellow corn	6 - 10 "	2,000 - 3,500 "
Pumpkin	10 - 12 "	2,500 - 3,500 "
Carrots		4,500 "
Sweet potatoes	Approximate Value	
Green leafy vegetables		
Tomatoes	Milk, 1 quart	1,500 - 2,000 "
Apricots (dried)	Egg yolk	800 "
Mangoes	Apricots, dried (4 halves)	1,500 "
Papaya	Potatoes sweet (1 medium)	4,500 "
	Carrots (1 medium)	11,000 "
	Butter (1 tablespoon)	400 "
Wheat germ	ADULTS	1 2 - 2 0 mgs †
Dried brewers' yeast		
Marmite	CHILDREN	
Whole grain cereals	1 - 6 years	0 4 - 0 8 "
Green leafy vegetables	7 - 10 "	0 8 - 1.0 "
Milk	10 - 12 "	1 2 "
Legumes		
Bananas		
Apples	Muscular activity, pregnancy, and lactation increase need for thiamine.	
Avoid overcooking. Serve food immediately. Use cooking fluids. Soda added to vegetables increases destruction of thiamine	Approximate Values	
	Bread 100% whole wheat (6 slices)	0.45 mgs.
	Whole wheat cereal (1 oz dry)	0 15 "
	Beans, navy, dry (½ cup cooked)	0 27 "
	Soya beans, dry (½ cup cooked)	0.40 "
Green leafy vegetables	ADULTS	1 6 - 2 6 mgs
Milk and cheese		
Wheat germ	CHILDREN	
Marmite	1 - 6 years	0 6 - 0 9 "
Eggs	7 - 10 "	0 9 - 1 2 "
Citrus fruits	10 - 12 "	1 2 - 1 8 "
Bananas		
Tomatoes	Approximate Values	
Apricots		
Brewers' yeast	Bread, 100% whole wheat (6 slices)	0 16 "
	Broccoli (3 stalks, with buds)	0 4 "
	Milk, whole (1 quart)	1 8 "
	Turnip, greens (½ cup cooked)	0 4 "
Milk	ADULTS	12 20 mgs.
Green leafy vegetables		
Wheat germ	CHILDREN	
Tomatoes	1 - 6 years	4.8 "
Brewers' yeast	7 - 10 "	8.10 "
Marmite	10 - 12 "	12 "
	Approximate Values	
	Milk, 1 quart	1 6 "
	Bread 100% whole wheat (6 slices)	5 1 "
	Bread white enriched (6 slices)	3 8 "
	Potatoes, sweet (one small)	1 9 "
Vegetable fats	Experiments are not conclusive	
Legumes		
Yeast		

*International Units
†Milligrams

1000 milligrams - 1 gram
28 4 grams 1 oz

Your Nails

HENRY DANTZIG, M.D.

Your doctor can tell a great deal about your health when he looks at—your nails.

DID you ever visit your doctor with a complaint that you thought was minor? As a matter of fact, didn't it seem so simple to you that you were somewhat embarrassed to consult him? You were probably surprised when he paid considerable attention to your story. Then when he questioned you in detail you began to wonder, especially when the nature of his questions seemed to you to be entirely irrelevant.

The purpose of your call was a simple thing, purely a local matter. You wanted to know why you were having so much trouble with your fingernails. Recently they had been cracking and breaking far too often to suit you. They didn't seem to grow the way they used to. It seemed as if they weren't growing at all.

Your doctor's line of questioning all but floored you. He wanted to know whether you had any gastric disturbances such as indigestion or belching. Had foods that previously agreed with you now become intolerable or troublesome? Had you ever felt any numbness or tingling sensation in your hands or feet? What about headaches? Had you been jumpy for any length of time? Had you been waking up tired in the morning? Were you full of pep during the day, or did you feel devoid of any ambition? Did you feel like sleeping in the daytime? When did you first begin to feel off-colour? He reminded you that it was six months since you had your last baby. You ought to be feeling pretty good by this time.

Your first reaction to these questions was doubt and wonder. But all of a sudden it came to you. It began to add up. Now that he mentioned it, you did recall that funny feeling you'd had in your hands, as if they were asleep. As you thought, you realized that you'd really been dragging around the house. And when you sat down, how easy it was for you to doze off! You also remembered dull headaches that came and went, and a general loss of stamina. You just didn't feel as strong as you used to.

You were somewhat puzzled that your doctor insisted on taking laboratory specimens, including a sample of your blood. Then he examined you generally including your heart and lungs. At last he looked at your nails carefully. He noted that your nails were brittle and thin, that the ends were cracked and split, that there were noticeable ridges, and that your nail beds were white instead of a fresh-looking pink.

While he was thus engaged you told him that only today you broke another nail when you snagged your stocking. Then you gave him your diagnosis. You were convi that you had a calcium defici But you really couldn't unders why you hadn't improved , taking calcium tablets for mo

It so happens that in your there was no local disease of nail itself. Your nail changes the result of a systemic condi No, you did not have a calc deficiency. But the doctor dis ered that you had a moderate ondary anæmia. This is usually to a deficiency of iron. Iron i sential for the proper growth health of your nails.

Your history, the doctor's ex. nation, and the laboratory re all conformed to make that c nosis. Now at last you rememb and could correlate past ev

When your feeling of lassitude was pronounced, so were the incidents of broken nails. You were much relieved when your doctor assured you that with proper treatment you had no cause for worry. In a few months your nails would gradually get back to normal and, most important of all, so would your general health.

Not all nail conditions are due to anæmia, nor are they always caused by a general systemic background. Anæmia happens to be a common cause. Another common general cause for nail changes may be nutritional disturbance. An inadequate intake of vitamin A and D can change the texture and markings of your nails and also delay their growth. In certain diseases of the lungs and heart, such as tuberculosis, the nails not only may be changed in texture, transparency, and colour (the nail beds being very pale or bluish) but there is a tendency toward clubbing, the shape of the nail also changing. Disorders of certain endocrine glands, especially an underactive thyroid can make your nails brittle and dry. There are many more internal diseases that also attack and affect your nails.

External factors can exert their influence if your nails are subjected to them over a period of time. Many fastidious women, especially those in the public eye, do their nails much too frequently. Sometimes they may change the shade of their polish several times a day. This necessitates the frequent use of removers, which can also cause changes in your nails. Besides the use of chemicals, some women chip or scrape off the polish. The nail plate is often scratched and thinned by this method of removal. They run less risk doing their nails twice a week than applying polish one or more times daily.

Soaps and chemicals used for cleaning can also be troublesome. If the agents you use are strongly alkaline, there is the possibility that after a period of time your nails will be softened and eroded. If the substance that contacts your nails is predominantly acid in nature, the results are just as bad. Acid solutions will make your nails thin and fragile. Many women wear gloves while doing their housework. This protects them from solutions. But the gloves themselves may cause allergies in certain persons.

Your nails are also susceptible to various types of infection. Both fungus and bacterial invasions are common. Fungus infections are more often seen on the toes. They can be caused by a long-standing case of athlete's foot. The fungus gets into the nail and slowly destroys it. At first the nail becomes opaque. The colour changes from white to yellow. The nail itself becomes thickened. If the infection involves the nail bed, the nail will be less firmly attached and less sensitive. There is usually deformity, and in general the nail takes on a dead appearance.

Bacterial infections are sometimes introduced into the nail bed from adjacent tissues. An infected hangnail, if severe, can burrow downward and spread into the nail bed. Frequent and careless manicuring, especially pushing under the cuticle, can directly carry bacteria into the vicinity of the nail bed and cause abscess formation.

Nails at best are slow growing. If you have ever injured your nail

(Continued on p. 28.)



Photo R. Krishnan

Your nails are also susceptible to various types of infection. Both fungus and bacterial invasions are common.

WHY



Use a Tooth-brush?

GLENN H. CURTIS, D.D.S.

ACCORDING to the Genesis *story of creation*, man was made in the image of God and came from the hand of the Creator as a symphony of perfection. God made every provision necessary for the perfect functioning of the human body.

Follow the story of the fall of man and the rise of the Jewish nation and you will see that frequent mention is made of requirements of body hygiene. Bathing the body and washing the hands came to have special significance in the religious ritual. A system of sanitation was enforced during the wilderness wandering of the people of Israel. But no direct mention is made of oral hygiene. We may be free to assume that the mouth was sufficiently self-cleansing that no special reference to this part of the body was necessary.

A survey of the animal kingdom reveals that only man (with the exception of an occasional domesticated animal fed on the diet of man) has major dental problems, yet man is the only animal that has access to artificial means of cleaning the teeth. Nature designed the teeth so that they are largely self-cleansing The crown of the tooth is contoured in such a way that during chewing, food is deflected over the surface, and a scouring action results. This is how monkeys, apes, and even primitive tribes of man may live a normal life span without artificial cleaning of the teeth and yet maintain a good state of dental health. If these same animal or primitive peoples are brought into a different environment and fed the foods common to our civilization, they become subject to our dental disorders.

The cleansing effect of certain natural foods has been demonstrated by several dental scientists. If apples, celery, carrots, or other detergent foods are eaten at the end of each meal, they help keep the teeth free from cavities and other disorders.

In our busy programme it would be inconvenient to carry stalks of celery or a bunch of carrots for oral hygiene. Because the diet available to the average citizen is non-detergent, the only alternative is to use some artificial means for cleaning the teeth and the mouth.

In the history of the tooth-brush the earliest mention is said to be found in Chinese literature of about 1600 B.C., but no record is made of the material or of its construction. Toothpicks are mentioned about one thousand years before Christ, and are said to have been made of wood, thorn, porcupines quills, and metal.

Oral hygiene was mentioned by Thomas Adams in 1617. He wrote that teeth were rubbed with a cloth. In 1623 he mentioned that "tee were cleaned with a little r dipped in oyle of sulphere." I addition there were dental fib pencils, sometimes called chev sticks. These were not tootl brushes, but cleansing sticks, mac from woods or shrubs such licorice, lucerne, mallow roo myrtle, dogwood, sassafras, an peach.

In Arabia and India dent cleaning sticks have a religiou ritual significance. Appropria prayers are made while cleanin the teeth. Today in some rur areas of America we may fin sticks of this kind in use. They a called wood mops or twig brushe

Analyzed in a test tube, the teet of man and of animals are foun to be composed of similar element

Outside the mouth during life, or inside the mouth after death, the teeth of both man and animal are found to be the most indestructible part of the body. It is clear that whatever the cause of dental disease, it is associated with diet. That some types of diet tend to increase dental disorders to a greater degree than others is a well-proved fact. When the teeth are not properly cleansed by natural means, we must use artificial means.

"But, doctor, I brush my teeth and still I have cavities!" This remark is often heard in a dental office. The person making such a statement may be sincere and truly believe he has given proper care to his mouth. Proper cleansing of the mouth requires more than placing a dentifrice on a brush, spreading it superficially over the teeth for a few seconds, and rinsing the mouth. We must give attention to each surface of each tooth, the soft supporting tissues of the teeth, and the tongue.

Recent studies by McCall, Curtis, and Overra at the University of Michigan School of Graduate Study reveal that during a period of twelve weeks students of dentistry and dental hygiene using several different methods of brushing, with periodical inspection by the dental team, were unable to prevent deposits in some areas of the mouth by brushing alone. In addition to a brush, many of us must use dental tape or floss and other means to thoroughly clean the teeth.

Studies by Dr. Charles C. Bass, of New Orleans, and Dr. Arnim, of Houston, show that a clean tooth does not decay and a clean mouth is not subjected to other dental disorders found in neglected mouths. According to these men, a clean mouth is a healthy mouth. A diseased mouth is one that is not clean!

How can you know whether you are doing a thorough job in caring for your mouth? There is a simple procedure that can be used and understood even by young children. By applying a dye that will not adhere to the surface of a clean tooth but that will stain food debris or a bacterial plaque a bright red, you can easily see areas that require attention. Children can understand that red means danger, and by cleaning until the red is gone they know the dangerous germs have gone too.



Basic funchsin is such a stain. It is relatively inexpensive, and can be obtained without a prescription. If you use such a stain once daily and thoroughly clean the mouth, a short additional brushing immediately after each meal will be adequate. Bacterial colonies usually require twenty-four hours or more to reach maturity, and by systematically removing all trace of such growth from all surfaces of the teeth each night before retiring, you can eliminate plaque formation on the teeth.

There are on the market today many good brands of dentifrices, but there is not, nor will there ever be, a magic formula in a tube that can be used as a substitute for proper diet and correct mouth hygiene. Perfume can cover body odour, but it is a poor substitute for a good shower bath. Likewise superficial brushing may leave a good taste in the mouth, but proper application to all areas of the teeth is necessary for proper cleansing.

Long and careful study has been given by the American Dental Association to the effect of the addition of one part of fluoride to one million parts of water. In all tests made, this simple measure has substantially reduced the amount of dental decay. In no instances has it been shown that ill effects result from the addition of this agent to the domestic water. The addition of fluoride, however, will not take the place of proper diet and proper mouth hygiene. Children who eat between meals and have access to large quantities of acid-forming foods may have cavities even when the water is treated, although the total cavities for such an area are less than in a similar area where the water contains no fluoride.

The dental schools are continually doing research, and rapid advancement is being made in the field of preventive dentistry. More

(Continued on p. 29.)

STORY TIME

FAZIL'S SECRET (PART II)

TOMMY TUCKER

[SYNOPSIS. Neither of the two captains—Fazil or Bob liked to have Rustum on his side. It wasn't that Rustum could not play, he played very well. But he was always getting angry and wasting a lot of time arguing.

Then Fazil thought up a plan a plan, he thought, that should cure Rustum once for all.]

"Now look here, Rustum, cut it out!" the boys shouted "We're sick and tired of your complaining all the time!"

Then Fazil walked toward Rustum. He started to say something, but suddenly stopped himself, turned aside, and said no more.

In a moment it was Fazil's turn to bat. He was ready He grasped the bat correctly He watched the pitcher, and felt his muscles tense

Then he struck.

He missed

"Hey, can't you pitch?" he shouted "What's the matter with you? You didn't even get it near the plate!"

Everyone looked at him in surprise They all knew the pitch had been good Fazil had nothing to complain about "What's the matter with *you*?" Bob asked.

"Well, I don't see how you expect me to play when you pitch like that," Fazil shouted back

Now everyone was really surprised They stared at Fazil in shocked amazement

"Well, get back there and give me some decent pitching," Fazil yelled



Slowly the pitcher prepared to pitch No one spoke The afternoon was intensely quiet. Then the ball whipped out of the pitcher's hand, straight toward home plate It would be very easy to hit, Fazil thought.

He swung There was a resounding smack as the bat connected. The ball flew high in the air and the fielders ran backward trying to catch it.



Fazil skidded around first then started toward second ball bounced on the ground fielder caught it; he tossed to third baseman, just before slid into third base.

"You're out!" Bob shouted

Slowly Fazil got up. His face arms were dusty from the fal had taken. He turned toward th

"I am safe," he said.

"Hey, are you kidding?" asked. "You were out and know it! Now quit making a fu anyway, you shouldn't care, side is ahead of us."

"I was safe!" Fazil called s bornly "I got here 'way befor caught the ball."

"Look," Bob said "I don't k what has got into you, Fazil, you know good and well you not safe You are out, so get that base and quit arguing!"

"I was safe!" Fazil shouted h his voice loud and angry

"You were not!" Now Bob angry "Get off the base! W had enough of you!" Bob pa and glanced around "What you say we quit for today? I if Fazil can straighten up play tomorrow Recess is practic over, anyway"

"Yes, sure," the boys answe and started off the field, loo back at Fazil, puzzled.

"I was safe!" Fazil shou after them "I tell you I was sa





Suddenly Bob turned around and came back toward Fazil. "Look, Fazil, it's just a game. Even Rustum here will tell you you weren't safe."

Rustum was frowning. He ran a hand over his hair. "You really weren't, Fazil. You were out."

Fazil turned on him, eyes flashing, face flushed. "I was safe! Now be quiet, both of you!"

Rustum only stared at Fazil, then turned away. Bob remained a moment. Then he too left, and Fazil looked after them both as they went.

Then he smiled, and a soft chuckle escaped his lips.

For the remainder of the day no one spoke to Fazil, though undoubtedly he was spoken *of* enough. And when at last, school was over, and they were headed home, Fazil was left alone. No one walked with him.

Fazil grabbed his books and started down the street. He couldn't help but smile when he thought of the day's activities.

Then he heard footsteps behind him. He turned, surprised, yet not surprised. It was Rustum.

"Hello," Rustum said hesitatingly.

"Hello," Fazil returned.

Rustum started to smile, a little nervously. "Look, you didn't have to do all that. I mean, I guess I've been pretty stupid and all." Rustum paused, embarrassed. "Fazil—do I *really* act as horrible as that?"

Fazil grinned. "No, no, I think I over-played my act a little."

Rustum walked along beside him for a long moment, in silence. Then he spoke. "I sure wish I could thank you, Fazil. I mean for what you did today. It was real swell of you—"

Fazil glanced up. "I probably made a lot of enemies!"

Rustum laughed.

Fazil spoke after a moment. "I did this because I think I understand how it is. I mean, a person acts one way a lot and he doesn't really know how it appears to others. You didn't think you were really so bad, did you?"

Rustum's face flushed. "No, I, that is—"



"Well, by seeing me act this way, you realized how you looked to others." Fazil laughed. "I used to have the worst eating habits, and my grandmother used to get annoyed. Then she tried a trick that really cured me. She came to dinner one day with her hands dirty and her hair tossed. She made a lot of noise, played around with the food, and spilled it all over the tablecloth. Boy! I never forgot that!"

Then they were both laughing.

"Well," Rustum said, before they parted at the corner, "thanks again, Fazil. And tomorrow, I'll tell them why you acted the way you did this afternoon, so they won't hate you."

"No," Fazil said quickly, "no, let's not tell them. Let's just both act right from now on and use a little sportsmanship. But don't say anything. This will just be a secret between us. O K?"

"Well, sure. But that's awfully nice of you," Rustum said.

"I'll see you tomorrow," called Fazil. And with that they parted, both laughing as they remembered the astonished expressions on the students' faces during the afternoon recess.

No one ever knew exactly what had happened. All they did know was that after Fazil had acted strangely that one day, Rustum changed.

They may have suspected what caused it, but no one ever told them. That was always Fazil's secret.

HOMEMAKERS' HELPS

Mary Ninaj Larson

THE TEACHING OF INDUSTRY

Manual Education. Children have to learn even the simplest movements and even the most elementary purposes. Early in his babyhood the only thing the baby knows to do with a clothespin, with a ball, or a Rupee, or a cushion, is to put it into his mouth. That is a habit developed from his earliest impulse. But later he begins to experiment with placing things elsewhere, or with throwing them. Now mother gives him the clothespins in their basket, and a big glass jar, and she works with him for a little while, showing him how to put the clothespins one by one into the jar. It is a fascinating experiment to him, and he imitates her. He may amuse himself alone for some time doing this. But notice with what difficulty he accomplishes the task. He can hardly grasp the clothespin; sometimes it falls from his chubby hand and outside the jar, sometimes an inexpert movement throws it beyond on the floor, and again the old habit asserts itself and the clothespin travels toward his mouth, perhaps to be arrested part way and turned in the direction of the new interest Later, his mother may interest him in putting them all in one way, with the heads all down, for instance.



Now it is very true that if the great object were to put the clothespins neatly into a glass jar, mother could do it with a great saving of time and energy, with the baby hands tied up and out of mischief. But the great object is rather to educate the baby's growing mind and direct his activities to the accomplishment of what his mind directs And therefore he must practise and practise; and mother, with that primary thought, must patiently rehearse him in putting clothespins from a basket into a jar, and from a jar into a basket.

That, perhaps, is play. Should not the desire of the little one to take part in the work of the mother be equally honoured? Plan the day's duties with reference to the extra time they will take when little hands are to be guided in the work. Give enough time to getting dinner and to the planting of the garden to allow for time to train the baby mind and hands in the same activities. Love will make patience; and by no means can you better develop that characteristic "the patience of of the saints." And in your patience you will teach your child patience.

PRECISION. Precision, or definiteness of purpose and action, must be possessed by the mother-teacher, and must be her design in teaching the child. The mother must train herself to know how to focus her thoughts upon her work, and how to make every motion count; and so she will save a gr deal of time to use in teachi Especially must she realize that precision is the secret of success teaching her child skill in labo We observed in the baby's efforts place the clothespins, that his trained muscles and his bal habited mind made his work sl uncertain, and erratic. So it is his efforts at work. His mind has be trained, and his hands made obey his mind—how to hold dish, how to roll the dough, how scatter the seed, how to use rake. Patiently show him the w then keep your patience with stumbling progress. Impatien fretfulness, nagging, will spoil your effort, and will, besides, bra his soul with the fault of patience.

INSIGHT. Insight into the chil desires and difficulties is necess to the parent-teacher, if he is to successful in making his child dustrious, in teaching him to lo work. The first rule is this: that child should be led to do that which he has a liking. Now mother's mind must be alert, a observing, and penetrating, to what most appeals to the child. U on these lines she can best gu him into work. Induction in activities less desired by the ch must be more partial and gradu

And equally the mother m teach herself to see the causes of child's dislikes. It will not do her to exclaim, "I don't see w you don't like to do it! When I w a little girl—" etc. The very co plaint to the child that you do understand him, his likes and dislikes, gives you a fatal handic



Perhaps he does puzzle you; but you must not acknowledge it to him, and you must not stand baffled before the puzzle. Study him, invite his confidence, pray for insight; for only by knowing the causes of the trouble and sympathizing with the impulses of your child's mind, can you help him to overcome or substitute a better activity or course for the objectionable one

DON'T OVERTAX. Do not overtax either body or mind of your child by your requirements of work. It does not hurt a child to get physically tired; it is good for him. He should be thoroughly tired every night, to make his sleep sound. But remember that the child cannot apply himself to his activities so continuously or so long as an adult can Frequent change of interest and occupation is necessary to him Therefore in your setting of tasks, judge aright his capacity and stop short of the exhaustion of his interest or his strength Again, companionship of the parent and of other children is a great stimulus to interest and to accomplishment of the work

FINISH TASK Finally, teach the child to finish whatever he begins For that very reason, he must not be given nor allowed to attempt more than he is able to perform It is more important for the child's mind and soul that a smaller task be successfully accomplished than that many greater tasks be begun and left unfinished —*Selected*

RECIPES

WHITE FRUITCAKE

Ingredients:

One lb almonds, 2 tablespoonfuls rose water, 1 lb. candied pineapple, 1 lb. candied cherries, ½ lb. citron peel, 2 cups shortening, 2 cups sugar, 8 eggs, separated, ½ lb coconut, 2 tablespoonfuls milk, ½ cup sweet cider, 4 cups flour

Method:

Put rose water over almonds and let stand overnight In the morning cut almonds, pineapple, cherries, and citron peel into pieces Cream the shortening and add sugar and beaten egg yolks. Add the coconut which has been soaked in the milk. Add cider, then the flour Add fruit and nuts, and lastly the beaten egg whites. Bake in small loaf tins (filled ¾ full) about 4 hours at 275° F. Yield: 8 to 10 pounds fruitcake.

CHRISTMAS FRUITCAKE

Ingredients:

One lb seedless raisins, 1 lb pitted dates, ½ lb currants, ¼ lb candied cherries, ¼ lb citron, ½ lb candied orange peel, ½ lb candied lemon peel, 1 teaspoonful, cinnamon, 1 teasponful nutmeg, 1 lb blanched almonds, 1 cup shortening, 1 cup sugar, 6 eggs beaten, 1 square melted chocolate (may be omitted), 3 cups flour, ½ cup orrange juice, ½ cup molasses.

Method:

Prepare and chop, or cut in pieces the desired size, the fruits and nuts. Cream the shortening; stir in the sugar gradually, the eggs, beaten, and melted chocolate. Sift together the flour and spices, and add to the fruits and nuts, blending well; then add to the egg mixture alternately with the orange juice and molasses. Bake the mixture in small bread tins at 275° F for 3 to 3½ hours. To keep the fruits moist, place a shallow pan of water on the floor of the oven during baking. Approximate yield. 10 pounds of fruitcake

CHRISTMAS CAKE

One lb suji, 2 oz. flour, 2 lb sugar, ¾ cup each honey, orange juice pine-apple juice, ½ lb ginger preserve, ½ lb. chow chow preserve, ½ lb candied peel, 1 lb raisins, 1 lb sultanas, ½ lb currants, ½ lb pumpkin preserve, 20 egg yolks, 15 egg whites (stiffly beaten), 1 lb nuts, ¼ teaspoonful cloves, 1 lb butter, ½ teaspoonful each cinnamon, cardamom, nutmeg

Method:

Prepare fruit and nuts Chop small Mix fruit, nuts, and spices with flour.

Cream butter and sugar. Add egg yolks one at a time. Add suji gradually. Add fruit, then fruit juice and honey. Last add egg whites well beaten

Line pans with six folds of paper Pour in mixture. Bake four hours Leave in oven one more hour with heat turned off

When cake begins to brown, cover with a double thickness of brown paper.

Keep about one month Cover cake with almond paste. Harden. Then ice with royal icing or butter icing

Royal Icing

1½ lb. icing sugar, 6 egg whites, little blue colouring, lime juice.

Butter Icing

1½ lb icing sugar, 3 tablespoonfuls butter, lime juice, 2 egg whites.

DON'T FORGET SICK FRIENDS

(Continued from p. 7.)

at the picnic last month." You and your family are in the pictures, but you haven't seen them. Immediately your thoughts are projected forward, you start hoping the visit isn't too far off.

When sending cards to close friends, do remember to add a few words of your own. Regardless of how unique or clever a card may be or how well the verse may be written, those few lines in your own familiar handwriting will mean even more to the recipient.

Don't feel that any gesture of kindness is too small to be welcomed. I will be here in the hospital for another week or ten days. By that time the large bouquets will be gone and only the heart-warming memory of the thoughtfulness of friends will remain. But the yellow-flowered plant, the pink swan, the doll, and the cards will be here still. These are the smaller gifts that every friend can afford. They are the little things that mean much.

YOUR NAILS

(Continued from p. 21.)

by getting it caught in a door, you have probably watched the progress of the indentation the injury caused to the nail bed. It may take as long as six months before it reaches the free end of the nail. If your nail has been severely injured, you may have recurring traces of nail deformity for a long time.

If your nails are devoid of half-moons, you need not be alarmed Half-moons are attractive, but are not always present in the healthy nail. Their absence is of no significance. These crescent-shaped white marks are due to areas in the nail beds where there is low blood supply.

Many home remedies are used by the housewife to combat brittle, fragile nails. She either soaks them or uses creams, lotions and oils, which she faithfully massages into each nail Unfortunately this treatment does not improve the nails. In nine cases out of ten brittle and breaking nails can be traced to a combination of external and internal causes. Lotions are of no value, for systemic conditions must be treated and local irritants avoided before the nails can be restored to a normal state

If you break a nail on a rare occasion, do not become alarmed Don't sit down and try to dig out a symptom or two or attach any importance to your nails at all

Don't expect your doctor to take a look at your nails and come up with a quick diagnosis. However, your nails do help in supplying him with clues or leads after a careful history and various examinations. To him your nails may serve as an indicator or a barometer. They are simply part of your over-all picture He cannot diagnose your condition from your nails alone.

It is only after repeated breaking and splitting that you become aware that something has happened to your nails. You may notice marked softness, thinness, brittleness and ridging. Later you may notice the pallor in your nail beds and the fact that your nails grow very slowly When these signs become evident, they may indicate that something is not quite up to par In this manner your nails can sometimes be a rough measure of your general health It is well to remember that persisting nail changes should prompt you to visit your doctor

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PLASTIC SURGERY FOR ADULTS

(Continued from p. 17.)

than she actually was, the board of education has been suggesting that it might be time for her to quit teaching She needed a few more teaching years to qualify for retirement Rhytidectomy was the answer for her After her operation she received no more pressure from her superiors, and just recently she finished the years she needed to qualify for retirement. She told me that after her surgery none of her associates suspected what she had done, but told her on many occasions that they had not seen her looking so well in years.

When correcting wrinkles, as in any other phase of plastic surgery, the surgeon needs careful judgment and a high æsthetic sense. Taking up too little skin will effect no improvement, and taking up too much skin will produce a strained. unnatural look.

The operation itself is so performed that the incision lines are hidden in the hair and in the folds of the ear and ear lobe.

Another procedure of great value in improving the appearance is the removal of heavy folds and bags from around the eyes. Often persons with such eye conditions

ıy be wrongfully accused of dissi-tion because of their puffy eye-s. This is a condition that may n in families.

Corrective surgery is done under al anæsthesia, either as a hospital an office procedure. The patients e not incapacitated; they merely ear dark glasses four to six days. ı a matter of a few weeks the cision lines are unnoticeable. aturally the people who have the ıost impressive results are those ıith the deepest wrinkles and bag-iest eyelids. The patient beginning o show a wrinkle or two is hardly ustified in undertaking this pro-edure.

One need only thumb through any of the popular magazines to see the scores of devices, lotions, creams, face peels, and other make-shifts that are offered at a high price for the claimed correction of the deeply aging face. It is only with plastic surgery that deep wrinkles, bagginess around the eyes, and other marks of age can be adequately removed.

Some of the methods advertised as face peels contain carbolic acid, which blisters the skin, producing a new pink skin under the blister. The effect lasts only a few weeks, until the inflammation has sub-sided. Then the old wrinkles and looseness are back. In addition, the patient has gambled with his very life, for these face peel solutions have caused many deaths merely from the inhalation of the fumes, besides hundreds of patients being permanently scarred and disfigured from excessive burns.

The plastic surgeon cannot make time stand still, but with proper indication he can certainly lessen its ravages on the physical appear-ance of those who do not want to appear old before their time or who want to look as young as they feel.

Before the surgeon undertakes this kind of surgery on any patient he must warn of several short-comings:

1. Horizontal forehead lines can be removed only temporarily. Their return can always be expected

2. Complete removal of lines in the cheeks should not be expected Any attempt in this direction will produce a fixed, pulled expression

3 Small perpendicular lines on the upper and lower lips cannot be entirely eliminated by face lifting. When these lines are numerous and deep the patient is a questionable candidate for surgery.

BUILDING SHATTERED HOUSES

(Continued from p 3)

the boss that he could master cir-cumstances and build a new de-partment that would succeed. And he did. Faith and courage won for him a wonderful victory. He built his house of dreams out of sheer pluck and dogged determination to win out! And the house stood this time, for it was made of tried material.

All of us have plans, and all of us are builders, but not all of us are brave enough to start again when our house of faith is broken down. It is for those who face the ruins of disappointed hopes and frustrated ambitions to bravely re-construct their shattered temple. Not that we can escape surprise, or even disappointment, at the turn of life's affairs, but for us there can be, there must be, no failure. Determine to master cir-cumstances and control them, and you will win out. The Architect of your destiny has permitted ap-parent failure for your own good. Let every disappointment be God's appointment to make and not to break your house of faith, and you will build an enduring temple that will stand forever.

WHY USE A TOOTH-BRUSH?

(Continued from p. 23)

and more emphasis is being placed on beginning dental care at an early age and on teaching the importance of home care.

Parents should take time to look at their children's teeth and to assist them in cleaning any areas that may be difficult for the children to reach. A brush that is too large for a small mouth may be responsible for neglected areas on the back teeth A simple straight-line brush is more effective than one having long tufts at the end or an arched shape. Two or three brushes should be provided for each individual so that they may be rotated in use It is well to have handles of different colours to identify the brushes. After using a brush, wash it in cool (never hot) water and dry it in air. Brushes placed in a closed container retain dampness and do not last as long as brushes dried thoroughly between each use.

Ask your dentist for advice as to the proper technique of brushing your teeth. Excessive scrubbing of the teeth in an incorrect manner can result in much damage to the gums and the teeth. Bleeding of the gums in a normal, healthy mouth during brushing may be an indica-tion of injury by the brush.

I have made no mention of the nature of tooth decay There is much to be learned about this disease, but we do know it can be

reduced, and the means of prevention is so simple that it is ignored by most people. By following the four simple rules given below, you and your family can enjoy good dental health.

1. Eat a proper, well-balanced diet at regular intervals.

2. Follow a regular daily routine of proper mouth hygiene.

3. Get competent dental care in case of accident, irregularity, and other problems.

4. Have regular dental examinations, including dental X-ray amination, to be sure inter defects are not overlooked.

Spend a few minutes every now in keeping your teeth cl so that you can avoid expense loss later on.

GARDENING FOR HEALTH

GLADIOLUS AND GLOXINIAS

D. G. Cooper

THOSE who have cultivated Gladiolus once, will continue to grow them year after year as there are few bulbous plants which thrive so readily with little care, and yet produce such a mass of gorgeous colours in the garden Excellent as cut flowers, Gladiolus are now grown on a large scale throughout India for commercial purposes as well.

There are hundreds of different varieties of Gladiolus ranging in every conceivable colour imaginable. Flowers of certain varieties easily attain a size four to six inches across, and plants grow anywhere between three to five feet tall.

To start the bulbs, place them in a box or tray containing sand or finely sifted gravel Water sparingly until the corms have sprouted. The next step will be to lift the corms carefully from the sand and re-plant them in their permanent beds A rich soil, containing a good proportion of decomposed stable manure, is best for Gladiolus. The tubers should be planted about four inches deep and six inches apart. A thin layer of sand covering the bulbs is recommended. Once the shoot appears above the ground, the progress of the plant is very rapid. It is advisable to stake the plants right from the beginning, to prevent the stems from twisting or breaking in strong wind. Liquid manure, prepared from cow or sheep dung, may be given to the plants every week This will promote healthy and vigorous growth.

When the flowering season is over, the water supply should be gradually reduced, till the whole plant dries up. The bulbs may be left in the ground for another month till they are perfectly dry Lift the bulbs carefully, and store them in saw-dust or sand, in a cool dry place. To prevent the bulbs from rotting in storage, a little D D T powder may be dusted on them with advantage Broken or damaged bulbs should always be discarded or kept aside, as they are invariably affected by fungus diseases.

Gloxinias are showy pot plants

GARDEN CALENDAR FOR OCTOBER

Plains

Vegetables	Sow seeds of Peas, Beans, Beet, Carrots, Cress, Lettuce, Mustard, Spinach, Radish, Onions, Tomato, Turnip, etc Transplant Cabbage, Cauliflower, Knol Khol, Asparagus, etc
Flowers	Winter season annuals can now be started Sow Antirrhinums, Calendula, Pinks, Larkspur, Nasturtium, Pansy, Petunia, Phlox, Poppy, Sweet Peas, Sweet Sultan, Wall Flower, etc Make cuttings of Dahlias and Coleus
Fruits	Plant Strawberry runners.

Hills

Vegetables:	Sow Lettuce, Vegetable Marrow, Cress, Radish, etc.
Flowers	Very few annuals will thrive if sown during this month. Try Browallia, Brachycome, Salpiglossis and Verbenas.
Fruits.	Time for pruning all fruit trees

and look very attractive with their profusion of bright flowers against a background of velvety foliage. Easily raised from tubers, seeds, or cuttings, their culture is very similar to that of tuberous Begonias.

Tubers planted in May or June, usually bear flowers within four-and-a-half to five months. Gloxinias prefer a shady location. Liquid manure applied when the buds appear, will greatly improve the condition of the plants and the size of the flowers. When the flowering period is over, water should be gradually withheld till the plants dry up. Tubers should be stored in sand and kept in a cool dry place.

THE DOCTOR SAYS

1 This question and answer service is free only to regular subscribers

2 No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases

3 All questions must be addressed to The Doctor Says Correspondence personally with the doctor is not available through this service

4 Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES Answers cannot be expected under ONE MONTH

5 Questions sent in on Post Cards will not receive attention

6 Make questions short and to the point Type them or write them very clearly

7 Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published Address "The Doctor Says," Oriental Watchman and Herald of Health, P O Box 35, Poona 1.

PULMONARY TUBERCULOSIS: Ques—"About two months ago I suffered from pleurisy on the right side and recovered after treatment in hospital For a little while now, I have a slight pricking pain in my chest. I am physically fit otherwise but have been advised by the doctors to be careful and not get too exhausted Kindly tell me how to keep fit and well?"

Ans—I would suggest you have a very careful physical examination to rule out the possibility of tuberculosis. This would necessitate taking the body temperature every four hours throughout the day and having a sputum examination. In pulmonary tuberculosis, the temperature is elevated in the afternoon. I hardly think you have this disease, but anyone who has pleurisy should be very carefully examined to rule out tuberculosis. If tuberculosis is absent and no other cause can be found for the pleurisy and the temperature is normal, deep breathing exercises and fomentations to the chest would be of value. Fomentations or hot cloths rung out of very hot water and applied over the area to be treated, should not be hot enough to burn the tissues, but should be hot enough to leave the skin pink when the treatment is finished Eat an abundance of fruit and vegetables. Spend some time in the open air and sunshine daily, and get a moderate amount of exercise each day. If your physician says that your condition is cleared up, I would not be concerned about it any longer.

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HIGH BLOOD PRESSURE: Ques—"A lady relative of mine aged about 66 years has been suffering from chronic asthma for the past 25 years which caused the development of high blood pressure. About six months ago her left side became slightly paralysed. Her blood pressure is 220. Her hand and leg work, but she feels that they have become weaker. She is daily given three tablets of theogardinal and also B complex tablets. She has grown very weak. Please suggest any treatment which may improve her condition. What diet do you think will suit her?"

Ans.—Your 66-year-old female relative has a very high blood pressure. As a result of her blood pressure, no doubt, she has had some haemorrhages into the brain, which caused the temporary paralysis and resultant weakness. She should reduce her weight if she is over-weight and should be on a salt-free diet. Serpentina Rauwolfia may be of benefit, but should be taken under the direction of a competent physician Her asthma may be associated with the high blood pressure and if so, it would be improved as the blood pressure is brought under control However, if it is the ordinary form of bronchial asthma some of the medicines used to control this would make the blood pressure go higher. She should take lots of fluids and it would be well to go on a strict fruit diet for a week to see if that would help She should not continue on this diet because it is lacking in certain essentials of nutrition.

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EXERCISE AFTER TUBERCULOSIS: Ques—"About four years ago I suffered from bilateral tubercular infections of the upper lobes but am quite healed now Kindly advise me if I can take some deep breathing exercises and other light forms of recreation like slow running, cycling, swimming, badminton?"

Ans.—Exercise is a splendid thing, but without examining you personally, I am not in a position to advise as to the amount of exercise you could safely take If your lesions are completely healed, there would be no restriction, but if not, too much exercise might result in breaking down the calcified lesions, releasing tubercle organisms thus spreading the disease In this case, I would urge you to get the advice from the doctors who have been treating you and hence know your condition

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WEAK LUNGS Ques—"I feel that my left lung is weak Nothing seems to digest in my system at night and I do not sleep at night too. There is a slight pain in the region of my left lung when I breathe. Kindly advise me What to do?"

Ans I would advise that you go at once to a well-qualified physician for X-ray of the chest and a Sputum examination Any pain in the chest should be treated with suspicion and taken care of properly

At night you should not have any food in the stomach that needs digesting The last meal of the day should be taken not later than five o'clock. This will enable you to sleep better and will give your stomach a rest, which it needs during the entire night

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FITS: Ques—"My brother, aged 20, has the following symptoms: Immediately after eating cold foods he sneezes, the corners of his mouth become covered with foam, he coughs, cries like the mewing of a cat, and can scarcely breathe What is this disease and what is the remedy?"

Ans—Without examining your 20-year-old brother, I am at a loss to know what would cause him to sneeze and produce those symptoms you mention after eating cold foods, unless he is suffering from an allergic condition. Allergy may cause sneezing, and some of these other symptoms, and may be caused by eating certain types of foods to which a person is allergic or sensitive. Medical science recognizes that heat or cold will also produce allergic manifestations in some people An Anti-Histaminic tablet prescribed by a qualified physician may give relief I would suggest first of all, however, that you try to find out if some of the food is responsible for this manifestation and if it is, eliminate it from your brother's diet.

THE LAST WORD

GEORGE M. BAROYA

Use of Mechanical Hearts

A large-scale project to save patients who have had heart attacks from death, by using mechanical hearts, has been started at King's County Hospital in Brooklyn, a borough of New York City

The mechanical hearts that are being used take over the job of both breathing and pumping blood for the body, thus doing part of the heart's work and allowing the heart to rest. For heart attack patients, the machine will take blood from a vein in the patient's leg, supply it with oxygen, and return it through an arm artery in a steady circulation The mechanical heart will take over about one-third of the entire pumping burden of the actual heart.—*U S I.S.*

Most Potent Hormone Drug Developed

The Upjohn Company, a leading United States pharmaceutical manufacturer, reveals that it has produced the most potent known hormone. Hormones are a type of drug widely used in treating arthritis, inflammatory diseases and severe allergies such as asthma and hay fever

Development of the drug is said to represent the latest advance in the search for a hormone with great potency but without some of the undesirable side effects of older hormones

Potencies of the new hormone have been termed "fantastically high" When administered to laboratory animals by injection, it proved to be 120 times as active biologically as hydrocortisone, a substance now widely used in medicine When administered by mouth, the new product was 190 times as active as hydrocortisone.—*U S.I S.*

Electric Device Helps the Blind to "See"

An electronic device called the "Hear-a-light," which helps the blind to "see" by means of sound waves, has been invented by two engineers of the Bell Aircraft Corporation in the United States.

The battery-operated device resembles a fountain pen, connected by wires to an earpiece. A sensitive photo-cell and an electric oscillator permit the device to transmit to the ear a steady tone that varies in pitch with the intensity of the light to which it is exposed

Thus, changes in the second tone enable the wearer to detect varying light intensities and even to distinguish between various objects and substances In a recent demonstration, for example, a blind person was able to distinguish salt from pepper by the sound tone created by the light reflected through the glass container

The inventors, Dr. Iben Browning and Dr S. Lawrence Bellinger, plan to market the "Hear-a-light" on a non-



profit basis to make it as widely available as possible They expect that its price will be about $20.—*U S.I S.*

New British Drug Conquers Animal Parasites

The last remaining group of parasitic infestations of farm animals has at last yielded to British research workers. This was announced at a press conference in London on May 27.

The disease is lungworm—a severe form of broncho-pneumonia caused by worms which live and breed in the lungs and air passages of the animals It is a common disease, and is found particularly in Europe and North America In Britain alone, a conservative estimate of the annual loss caused by the malady is £3,000,000.

Now scientists of Imperial Chemical Industries (ICI) have produced a treatment which can be administered either orally by a farmer or intravenously by a veterinary surgeon. Three doses over a period of three weeks will, it is claimed, rid animals of the parasite. It may also be used effectively to prevent outbreaks by periodic treatment

It is not a cure-all It will remove the lungworms but, naturally, it will not repair damage to the lung Therefore, the earlier it is used the more favourable will be the results, ICI points out

The disease mainly attacks cattle, sheep, and pigs It will also affect other animals both wild and domestic, including dogs, cats, reindeer, camels, badgers, foxes, porpoises, and mon geese.—*B I S*

Anti-Malaria Drug Is Effective Against Arthritis

The anti-malaria drug chloroquine has been found to be 70 per cent effective against rheumatoid arthritis, according to tests made by three international research teams headed by physicians from Canada, Rumania and the United States

The drug acts in a completely different way from cortisone, one of the principal drugs used to date in arthritis cases, the doctors say Chloroquine appears to act by attacking the disease process in the body as a whole Unlike cortisone, it gives no immediate evidence of an anti-inflammatory effect on the joint swelling and pain caused by arthritis

When used over a period of many months, however, chloroquine continuously controls arthritic "flare-ups" of pain. This action is different from that of cortisone, which is effective only while it is being taken, and once stopped, allows the inflammation in the joints to return.—*U. S. I. S.*

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C.A.R.E. HELPS INDIA OVERCOME POVERTY, ILLITERACY AND DISEASE

(Continued from p. 2.)

and many others. It is helping farmers, resettled refugees and others to earn a better living. In schools, universities, and libraries in India, CARE books and other aids are quickening the educative processes.

In the first six years in India, CARE has distributed some $2.5 million worth of relief and self-help supplies in all but one state. This includes, besides thousands of food packages, about 7,500 Indian-designed and manufactured ploughs and 7,500 agricultural hand-tools which are helping in India's fight for greater food yields.

But 1957 will see a tremendous expansion of CARE supplies to India which, in this one year alone will exceed in value the entire supplies over the last six years. Valued at well over $3 million, the supplies will include almost 12 million pounds of skimmed milk powder and almost two million pounds of rice and beans. These will be distributed to TB out-patients and families of refugees, leprosy patients and others in great need. They will also provide a supplemental milk diet for school children. In addition, the self-help programme will receive much greater emphasis. More than 3,000 sets of ploughs and agricultural hand-tools will be distributed. In collaboration with the Government of India, supplies of sewing machines, soap making equipment, community radios and other similar items are being stepped up to an increasing number of village community development projects. Medical aids, books and other technical literature will be considerably increased. The Co-operative League of the U.S.A. has donated $6,000 through CARE for the Indian Co-operative Union in its efforts to develop a co-operative spirit in six Indian villages.

Currently in the works is a significant self-help educational project which, when underway by about the end of this year, will help *refugee primary students*. Under the project, school kits will be available to refugee students. These kits will contain a slate, pencils, and text books for standard I, II, III and IV. (CARE goal: to reach every student in refugee primary schools in India.) In addition a children's bookshelf in Hindi is also being worked on by CARE.

The CARE story in India would hardly have been successful had it not been for the wonderful co-operation from the Government, private organizations and the people. More than 150 Indian organizations, running the gamut from the Government to Rotary Club and Bharat Sevak Samaj, co-operate with CARE in its distribution programme. They are the outlets through which the American expression of good-will permeates down to the Indian people, emphasizing the person-to-person nature of CARE.



Photo: U.S.I.S.

The self-help projects of CARE in India have helped refugees and other needy people to rehabilitate themselves. Many farmers such as these from the Punjab, are seeing better times through the use of improved CARE ploughs.

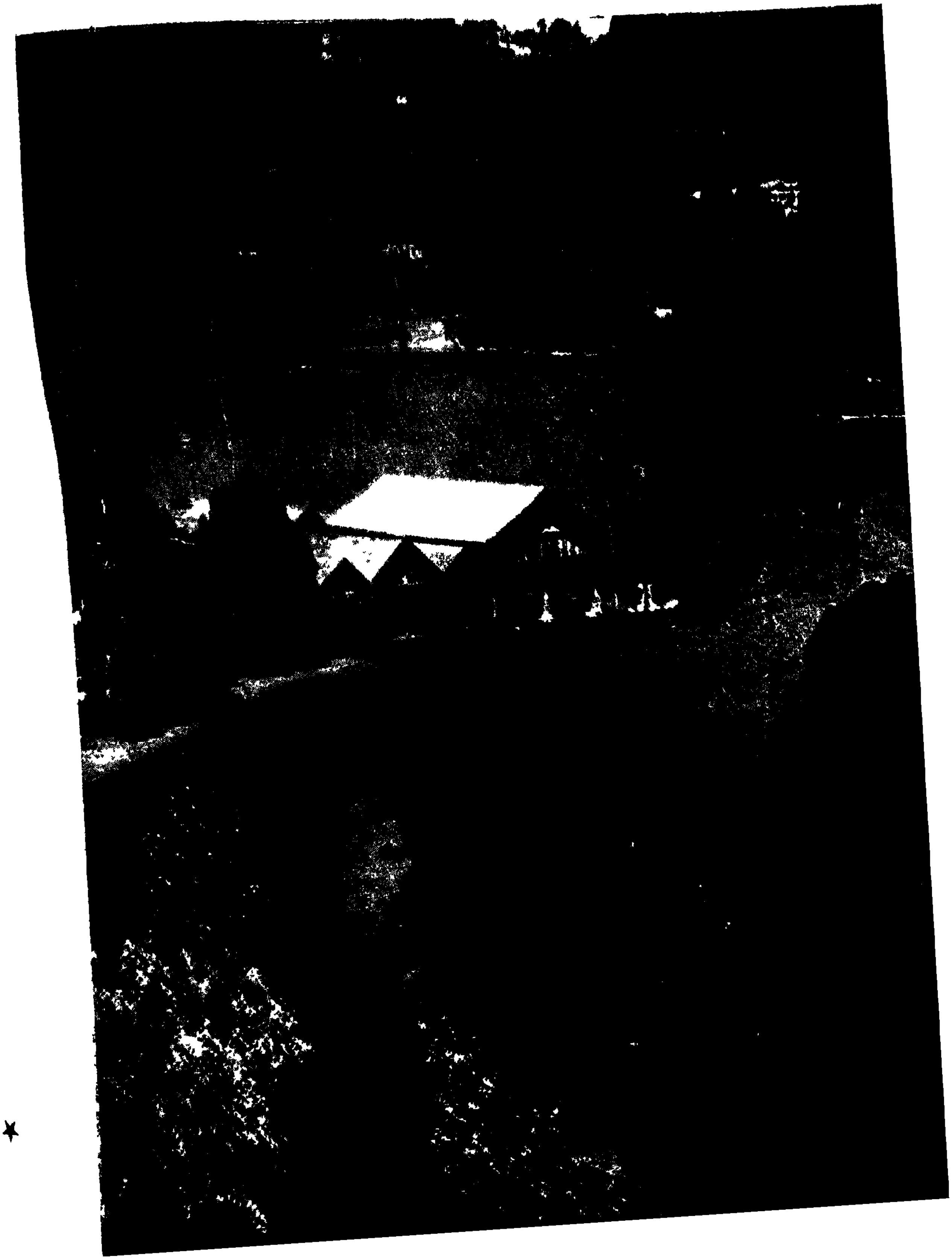
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Way to Scientific Poultry Breeding

K. N. M. PILLAI

POULTRY farming in Bombay State, still in its infancy, as in the rest of India, is getting a new impetus under India's Five-Year Plans and Indo-American technical co-operation Backyard poultry farming, using indigenous practices, is gradually giving place to modern, scientific breeding

The Bombay Government-run Central Poultry Farm here is showing the way to improved methods of poultry husbandry Adopting American techniques of feeding, breeding and disease control, the farm has helped to upgrade the poultry stock in Nagpur, Vidarbha and adjoining villages of Bombay State

The farm had a very small beginning during the Second World War Set up by the army, it primarily catered to the defence forces stationed in Nagpur It was taken over by the State Government soon after the war and was incorporated in India's First Five-Year Plan

Since then, the farm has considerably expanded It has now a flock of more than 5,000 new-look birds (Rhode Island Reds and White Leghorns), housed in specially designed well-ventilated shelters

The 30-acre farm is equipped with an electrically-operated incubator with a capacity of 4,000 eggs Eggs are usually hatched once in three weeks When they reach the pullet stage, the birds are sent to the lower farm at nearby Telenkhary

Associated with the development of the farm and the adoption of



improved poultry practices is the American Technical Co-operation Mission (TCM) in India TCM has helped the farm with technical advice equipment, and breeding stock

The Nagpur farm received 900 TCM chicks from the 30,000 which arrived in this country recently from the United States for breeding purposes Out of these, eighty-five per cent are femal chicks

"The chicks are behaving wel They seem to have acclimatis themselves to their environment They will be our foundation bree ing stock," said K G Bhide, assist ant director of animal husbandr "We expect them to lay eggs i four to five months' time," joined i Dr Earl N Moore, TCM poultr adviser

Dr Moore, 53, is a veter American poultry specialist as signed to India under the TCA Kansas State College contract H works with agricultural and veter inary colleges in Bombay State an Andhra Pradesh as poultry advise "Our aim is to improve both th academic training and the practic aspects of poultry farming, h remarked

The twin problems of poult farming in India, according to Di Moore, are the lack of balance feed and the widespread prevalen of diseases And he has attack these with a measurable amou of success by adapting poult farming practices in Kansas St in central United States to this cen tral India region.

Explained Dr Moore. "Bot Kansas State and Nagpur ha more or less identical climatic co

(Continued on p. 36.)

The Oriental Watchman and
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A mountain and a river are good neighbours

—George Herbert

Photo S G Jayapalan

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Minute Meditations

HUNGRY FOR KINDNESS

D. A. Delafield

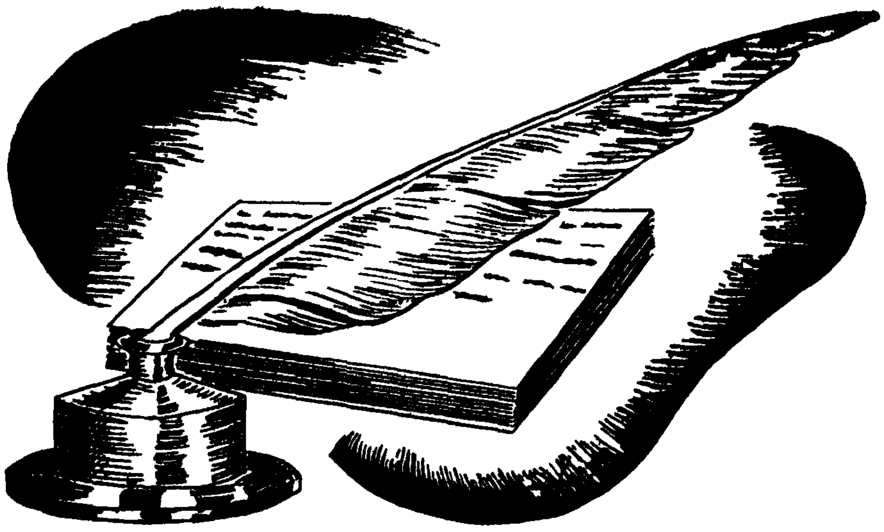
THE milk of human kindness can easily curdle if we're not careful. The curdling goes on in the heart when we fail to pass on our blessings. If we have drunk deeply of someone's kindness, let's pass it on. Let the good deed flow from the heart with the rich, creamy substance of love above it. Don't let it curdle.

As long as we live we shall need kindness and we shall need to give it. Kindness means bread for the hungry, clothes for the naked, shelter for the homeless, and most important of all, loving words that can be understood by broken hearts. And we need not cross the world to be kind. Perhaps in your office, your place of business, or your home, there is someone who is hungry for a word of cheer, a smile of appreciation, a kiss of love, or the kindness that speaks louder than words.

Be gracious, then, and feed these starving souls. Don't let them wait any longer. Kindness will increase your stature, not lower it. It is the real man who softens down and makes himself gracious. Don't be stiff and formal. You can't win anybody that way. Be like the reed that bends its head and bows to the elements. Many a man has lost his way in life because he refused to soften down his stern attitude toward others.

When William Gladstone was chancellor of the British exchequer he made an important speech in which he quoted figures that were greatly in error. Of course the newspapers exposed the fallacy, and Gladstone looked ridiculous. The clerk who made the mistake in compiling the figures was asked

(Continued on p. 27.)



THE EDITOR SAYS

(When our readers receive their copy of the "Herald of Health" for the month of November, the Second Session of the Asian Institute of Scientific Studies for the Prevention of Alcoholism, under the auspices of the National Committee for the Prevention of Alcoholism, held at Wilson College, Bombay, India, may still be in progress. This Institute is to be in session from October 28 to November 8, 1957, both dates inclusive We reprint the following true story in honour of the movement for total abstinence reform.—Ed.)

DEATH IN THE BOTTLE

The Confession of a Moderate Drinker

DONALD M. HEWITT, M.D.

"I GUESS you're wondering why I dropped in to see you," remarked the tall lean-jawed, sun-tanned man opposite me in my consulting room.

"Well," I answered, looking into the icy blue eyes gazing steadily into mine, "I have a pretty good idea that it wasn't just because you wanted to pass the time of day or discuss the weather. Further, I observe that you're from Texas, and that you're either a rancher or an oilman."

The man's gaunt features relaxed in a tight smile, and a slight twinkle replaced for a moment the steely look in his eyes.

"Say, doc," he drawled, "that's not bad at all for amateur Sherlock Holmesing. I *am* a rancher from around Fort Worth way, and I did stop in to talk to you about something that's been on my mind for a long, long time In fact," he continued, suddenly clenching his hands, while a look of intense bitterness and hatred clouded his face, "there's something on my mind I'll never forget . . . that I can't forget even if I live to be a hundred or more.

"You see, doc," he continued, as I listened interestedly, "I've always had booze around the house. Before I got married about thirty years ago, I was a pretty wild character and did my full share of drinking and being wild. But after I met the little woman, I settled down and began socking that money away in the bank instead of supporting the saloon owners w it. The ranch prospered, and I wife and I were blessed with a fi family of two boys and a gi I continued to drink every day just a few pegs every evenin before and after dinner . . . the so called social drinking, you under stand." The man's voice suddenl became hard and scornful. "Socia drinking!" he repeated, in a tor filled with utter loathing, "wh that's the most insidious, damnabl seductive phrase ever coined b Satan. Social drinking was wha led my boy, Roger, to Chicago . . yes, he died there in a stinkin liquor den on skid row without friend to comfort him That's wh social drinking did for him!" th man ended, pounding his fist on m desk with a vehemence that threa ened to shatter the glass top.

"After Roger died, I made u my mind to put the booze out of sight where the two younger kid would never see it But the curse habit had got me, too, althoug I never got into the trouble th many other alcohol addicts I kno do. I continued to take a drink no and then on the sly, where I wa sure the kids wouldn't see me. M daughter Dorothy grew up to be tall, slender Texan beauty who wa the apple of my eye. In high scho she was the most popular girl i her class, and the boys fought ov her for dates. Then came time fo college; and Dorothy enrolled a Texas Christian, where her goo looks, generosity, and good natu quickly brought her the populari that she had enjoyed in high schoo

"I will never forget the shock— the utterly devastating blow— suffered the night that Doroth came back from a college danc giggling foolishly and reeking o alcohol. My thoughts went back t my poor son, Roger, who had ende his life as a skid row alcoholic rott and I stood aghast at the prospe that my beloved daughter was star ing down the same enticing bu disastrous path. I cursed myself fo

my own weakness that prevented me from putting booze forever out of my own life.

"Next day I had a heart-to-heart talk with Dorothy. For the first time I told her the truth about her brother, Roger, and how booze had cut his promising career short. I pointed out the dangers awaiting her if she continued her seemingly innocent drinking, and asked her to promise me to leave the stuff alone. Dorothy thought the world of me and assured me if it would make me and mummy happy, she'd never touch the stuff again. And I believe she kept her word, until one night she told me she was going to a dance with one of the big men on the campus . . . president of the student body, and so forth She was so excited about the date that I didn't have the heart to say anything that would put a damper on her high spirits, but for some reason that I guess I'll never be able to explain, I had a premonition that the evening was going to end in tragedy.

"Just before Dorothy's friend was due to call for her, I got a call from the ranch foreman saying that a prize bull I had bought about two weeks before was sick. I had paid $10,000 for him and naturally wanted to protect such an expensive investment. Giving Dorothy a hurried kiss, I jumped into my station wagon and took off for the ranch corrals about four miles away It took me about three hours to get everything straightened out, and when I got home, Dorothy had been gone for a long time. I found my wife sitting in the living room with a worried frown on her face.

" 'Why all the heavy thinking?' I asked, seating myself on the arm of her chair and putting my arm around her.

" 'Oh, Ben,' she said earnestly, 'I guess you'll think I'm just a foolish old woman, but when Dorothy went out of the door with that young Rodney Potter about an hour ago, I could have sworn I saw a whiskey bottle sticking out of his hip pocket.'

" 'Now don't you go worrying your pretty head about Dorothy,' I replied lightly, although my heart had turned leaden at her news, 'Dorothy has promised me she won't take anything to drink, and you can depend on her word '

" 'Yes, I know, Ben,' my wife replied, 'but ever since poor Roger . . .' Her eyes filled with tears, and she was unable to continue

" 'There, there now, Barbara,' I consoled, 'Dorothy's a girl, but her character's a lot stronger than Roger's was. I can wager every cent I've got she'll keep her promise. So dry your eyes and stop worrying '

"I tried to dismiss the topic from my mind, but try as I would, my mind continued to be filled with thoughts of my poor dead alcoholic son and with half-formed dread for my daughter. The hour was becoming late, but I just couldn't face the prospect of countless, sleepless, tossing hours in bed. I decided to read, and picked up a detective story I don't know how long I sat there, but I must have dozed off, because I was suddenly brought back to reality by harsh jangling of the telephone Never will I forget the message that reached me over the wire that night.

" 'Is that Mr Curtis?' a man's voice asked. I replied that it was, and my informant continued, 'This is Sheriff Thomas of Dallas, and I'm calling from my office here. I'm afraid I have some bad news for you, Mr. Curtis.' At this point my heart felt like a heavy leaden weight in my chest, and the rest of the Sheriff's words became a

(Continued on p. 7.)

HEAD INJURIES

(Continued from p. 9.)

pressed, to have a change of personality, and gradually weakness of one arm or leg. The symptoms may be shrugged off as being due to age Too often a physician is not consulted until the patient is unconscious or paralyzed.

If any symptoms such as mental confusion, memory loss, drowsiness, weakness, or paralysis appear in an older person, even when there is no known history of head injury, he should have a thorough neurological examination by a surgeon.

Be wise; be sure

Head Injury Care

The following tips should be followed by anyone caring for a head-injury patient:

1. Observe the patient every hour or two to make sure his mental reactions are not changing.

2. Gently awaken a child two or three times during the first night after his injury to make sure that his sleep is natural. Call a physician if headache or vomiting increases in severity, if the child becomes unresponsive, if he has pupil irregularity, or if he develops weakness of an arm or a leg.

3. Have an X-ray taken of the skull in any head injury, to make sure there is no fracture.

4. Any head-injury patient having alternating wakefulness and drowsiness should be under a physician's care in a hospital, where immediate operation can be performed.

5 Never discount a bump on the head in an older person as being insignificant. It may result in a blood clot on the brain.

6. In any questionable case of head injury, see to it that a thorough neurological examination is performed.

THE STUDENTS' GUIDE

ARE WE MASKED BEINGS

Bhabes Chandra Chaudhuri

THE popular notion about man is that his appearance is but a reflex of his personality or that his face is the mirror of his mind. A careful examination of it, however, generally reveals a reversal of this concept. This means that the psycho-analysis of the mind indicates that appearance is a deceptive factor in character-appraisal!

The clean-shaven healthy looking gentleman in a neat suit who is eyeing you from behind a pair of gold-rimmed glasses from a corner of your bus, may appear to you to be either a barrister or a business magnate The bilious-looking gentleman in the soiled shirt seated by your side, belching out smoke from the fag-end of his "bidi" may seem to you to be a mere clerk. But, if you are earnest enough about finding out their true circumstances, you may discover, to your surprise, that your fancied barrister is only a well "made up" canvasser while your imagined clerk is an eminent merchant of Calcutta!

The saying that the face is the mirror of the mind, was perhaps invented first by the cartoonist or the caricaturist. He created a characteristic technique to express the oddities or foibles of his fancied object in peculiar garbs. Thus, to be a poet or a philosopher—he imagined—one must needs have a grizzly beard, dishevelled hair or an odd moustache; or to be an artist one should have an air of carelessness and wear a loose long necktie; or to be a professor he must appear a little inwardly calm and o u t w a r d l y emotional. Thus, through the humourous sketches of these persons we have gotten preconceived notions about a poet, a philosopher, or an artist and when we meet them in real life many of our fancied notions crash to pieces!

The reason being this, every person has been endowed with at least a double personality. Or to explain it in another way, personality is not one and the same always. The way one is behaving may change with his circumstances or environment. There is an old adage that says that a man is known by the company he keeps! That is only partially true!

We may chat a good while or work long hours together in the same office with a partner and yet be quite in the dark as to his true "colour." He may be affluent and free at home but is surely not so while under the strict rules of the office. Hence, whatever he does under restraint at the office, he does, possibly, in a way to adjust to an *official* personality, which the office desires as *per* its rules and procedure of business. Will it be right then, to take him at what he might be intrinsically worth in his official cloak? But the behaviour of this person—in his *home*—may be surprisingly different.

There, with the restraint of the office gone you may find him conversing in a free and easy way or unbosoming "secrets" which you didn't even imagine. Such behaviour he could never indulge in at the office. Herein then, one could expect to ascertain his true "colour"—because mind can only speak to mind and this is to a great extent true only in discovering the precise nature of his character in becoming circumstances. Indeed, company or association is not always a guarantee to warrant a free and frank confession or exposition of the nature of the inner mind There are companions and companions, just as there are friends and friends. Hence the friend—the right sort of friend—is under all circumstances the ideal type to provide you with satisfactory results.

Pick out that man with whom he is always friendly in weal or woe, danger or distress, and you have discovered his type of character or personality at once!

If his friend is frugal, he is never a spendthrift; if he is sober, your friend is never boisterous; if a drunkard, he is never temperate Being of like nature and habits—

A BOOK REVIEW

A CLASS BOOK OF ANATOMY, PHYSIOLOGY & HYGIENE by Km. Isabella B. Davis, M.A., and Dr. J. D. Sampath Kumaran, M.A., Ph.D., 319 pages. Published by Kumaran and Davis, Mhow, M.P. First edition, 1957. Price: Rs. 4.50.

This work is the result of many years of experience and training, and was co-authored to overcome a dearth of suitable text-books which conform to the various syllabi prescribed by the various Boards of Study.

The simplicity of language and multiplicity of illustrations and coloured diagrams will definitely satisfy the needs of the High School and Intermediate students. The bibliography will also be of immense help to students.

erein lies a true clue into a orrect understanding of your iend's character or personality.

This dual aspect of man that iakes him look so different in ifferent environments is a phe-omenon of life.

As we grow, we tend to hide our ersonality under a blanket and live n under a false mask.

To the general public we appear i the theatrical air of this mask. They cannot, obviously, know the ue nature of one's personality—iat lies deep and secure as does a ernel in a nut.

It is, therefore, clear that in our laily round of acquaintances we can know people as much or as little as we would.

There might be a pleasing companion who can outshine a Sharian wit—whose gaiety, and cheerful humour may contrive to make him into your boon companion! But associate yourself with him quite freely and you will discover that his joviality is but a mask to hide the pang of a deep-seated mental wound received somewhere!

Turn now your attention to school pupils and notice how calm and quiet they behave in class But, what a contrast is their behaviour when on the play-ground! They have dropped the mask of "gentility" and are romping and shouting as the free, natural, and healthy beings that they are.

A cat never tires of purring; neither is a rat sick of gnawing.

Similarly a lark sings the same song and the swallow nests in the same place year in and year out. But man? He wants more. The offspring of an ever-changing nature—he desires to change his iam of yesterday for the jelly of to-day, to escape the oneness of relish in life. And because of this ability to reveal different faces of his character to different ones under different circumstances, he has become the creator of arts, crafts, and sciences as varied as human nature itself.

DEATH IN THE BOTTLE

(Continued from p 5.)

blur only one or two phrases emerging from the jumble 'Your daughter Dorothy . . in the morgue identified by name on wrist watch . . . high-way accident!'

"The phone slipped from my nerveless hand and clattered to the floor I sat dazed and uncomprehending by the telephone for what may have been minutes or hours Suddenly the mists cleared away from before my eyes, and I looked up to see my wife regarding me silently with a pale, grief-stricken face.

" 'It's happened, hasn't it, Ben?' she whispered hoarsely, before I could tell her anything. I nodded dumbly, too overcome by emotion to form any words

" 'You have to be brave, Barbara,' I began, 'Dorothy has met with an accident and '

" 'Tell me, Ben, she's dead, isn't she?' my wife asked brokenly 'We'll never see her again on this earth, will we?' She began to weep softly, and I turned my head away, unable to bear the sight of her overpowering grief.

"Suddenly a tremendous and insensate rage seized me. First my son and then my only daughter had been taken from me, and the cause of it had been booze I ran from the house to the car, got into my station wagon, and began a wild ride to Dallas. I remember very little indeed of that trip in the small hours of the morning, but I still recall looking down at the pale, still form of my beloved daughter as it lay on that morgue slab. Strangely enough her features were unmarked, but a slight oozing of blood from her nostrils and ears told the tale of a lethal skull fracture

"As I stood grief-stricken in that cold and silent room, I swore a mighty oath to spend the rest of my life fighting the booze that made such things possible. For there was no doubt in my mind that it was because of her escort's drinking that Dorothy's young life had ended. My heart filled with bitter thoughts of her escort, who had placed his own selfish pleasure and enjoyment before concern for her safety.

" 'Where's young Rodney Potter?' I asked Sheriff Thomas, who stood at my side.

" 'He's over in the hospital and in a very critical condition,' replied the sheriff; 'in fact, it's a toss-up whether he pulls through or not Got a badly fractured skull and internal injuries.'

" 'Tell me just one thing, Sheriff, I asked grimly 'Had they been drinking when this happened?'

"The sheriff paused a few seconds before replying.

" 'Young Potter had,' he finally said slowly, 'but your daughter didn't touch a drop as far as we've been able to learn.'

"I stumbled back out into the night and began the long drive back home. My jangled nerves cried for relief, but I knew that sleep wouldn't come easily. From a habit of many years, I began to think of the temporary peace a slug of whiskey would bring me. As soon as I reached home, I stumbled from the car and staggered wearily into the living room. Once there, I quickly opened the cupboard where I had kept a bottle of whiskey for many months. It wasn't there! In its place I saw a slip of white paper. Seizing it, I read the following:

" 'Rodney forgot his bottle, Dad, so we borrowed yours for the night. Don't worry, I won't take any of it.'

"The note was signed: 'Dorothy.' "

HEAD INJURIES

ROBERT K. JONES, M.D.

Your brain is a most precious heritage. Do all you can to avoid head injuries.

A HEAD injury can be a serious threat to life. Because the symptoms vary with different age groups, it is important that everyone know the facts about head injuries and what to do for them.

In our age of automobiles and accidents, head injuries are on the increase.

In a survey made by the Automobile Crash History Research Team at Cornell University Medical School, the researchers found that seventy per cent of all persons injured had head injuries. A skull fracture or injury to the brain beneath is ever imminent.

Birth Injury

The earliest exposure to head injury is at the time of birth. The pounding of the baby's head against the opening is in itself quite a severe pressure. This is borne out by the presence of blood in the spinal fluid (the clear liquid that circulates around the brain and spinal cord) of babies shortly after birth This blood may be present because of a minor head injury and resultant bleeding of the surface blood vessels It is caused by the moulding of the head and the pressure of the head during delivery.

Should the mother's pelvis be abnormally small or the baby's head very large, the baby may have difficulty in being delivered. This may cause severe head injury, and the damage to the brain may later lead to cerebral palsy. Once injury to the brain has occurred little can be done about it other than rehabilitation and orthopædic corrective measures Prevention is best. If the baby's head is too large or the mother's pelvis too small, the obstetrician will no doubt select a Cæsarean section or some other means of delivering the child to sidestep injury to the head. Neurosurgeons can offer very little in the way of treatment for this type of head injury.

Childhood Injury

As a baby grows and becomes more active, another danger of head injury is a fall from crib or bassinette Also as he learns to walk he may fall, striking his head.

Because in babies and small children the skull is still flexible, slow bleeding within the brain is not revealed by headache or pain. Unconsciousness rarely occurs. Vomiting may be the first symptom It can occur any time from the first day after the injury to four weeks later. It usually indicates that there is increased pressure within the head The pressure is caused by slow bleeding from a blood vessel on the surface of the brain injured indirectly by a blow to the head. Tiny blood vessels on the surface of the brain are not so well protected in children as in adults, because the skull has not hardened.

Signs to Watch for

1. A bulging of the soft spot on the top of the head is a sign that parents should watch for in children with a head injury. In children under eighteen months of age the soft spot is still open. As more and more blood collects, it crowds the available space and exerts pressure on the brain of the child. As the pressure pushes against the soft spot, it gives way, and bulging results.

2. Sleepiness, drowsiness, or unconsciousness in a child with a head injury must be watched for. It is a good practice to waken the head-injury patient every hour during the night to determine whether he is merely sleeping. If he cannot be aroused, a physician should be called at once.

3. The size of the pupils of the patient's eyes should be observed by the mother to make sure they are normal and react to light. If one pupil is larger than the other, the patient should be rushed to a hospital immediately. If the pupils both remain widely dilated and enlarged, it may be a serious sign

4. Call a doctor. Should any of these signs occur in a child, a doctor should be consulted immediately.

The treatment in this type of head injury is relatively simple. The injury is not serious if the child is seen in the early stages. The surgeon can make an opening in the skull and remove the accumulation of blood. The injured vessel usually heals itself, and no further treatment is needed.

Adolescent Injury

In children and adolescents who engage in sports such as football and ice hockey, head injuries are quite frequent. Since the older child has a thicker skull, and more rigid head, his symptoms of head injury are different from the younger child's. In the older child the shock to the brain is sudden, and immediate unconsciousness often may occur. Bleeding, with collections of blood pressing on the brain, is less likely to occur. Instead, many small bleeding points may occur throughout the brain

These diffuse, small hæmorrhages cause prolonged unconsciousness, which is the chief symptom. Coma of this nature requires hospitalization and close nursing care for as long as the unconsciousness exists. It may last as long as a month, but many patients having such a condition recover almost completely.

Surgical intervention in these injuries is hardly ever indicated, and nursing care is the most important part of the treatment

Middle-age Injury

In young and middle-aged patients head injuries are usually serious, because they are likely to be caused by automobile accidents or battle participation during war These often result in skull fractures, with pieces of the skull driven into the brain.

Actually a simple fracture of the skull is not serious, for splints and casts are not necessary A cracked skull is not so serious if the brain beneath the fracture is not injured

Prolonged unconsciousness is the usual reaction of patients with severe head injuries.

Because the middle-aged person may often have bleeding from an artery within the head and the resulting collection of blood builds pressure on the brain rapidly, symptoms to watch for are (1) paralysis of eye muscles, with drooping of the lid or turning in or out of the eye; (2) weakness or paralysis of an arm or leg on one side of the body; (3) loss of consciousness

For a patient having these symptoms, surgical intervention is imperative if death is to be prevented.

The so-called lucid interval, or period when the patient comes to himself and talks quite intelligently, then falls back unconscious is a most important sign, and should not lull that attendant into a feeling of security This interval is one of the most important symptoms to surgeons in head-injury patients It reveals rapidly increasing pressure within the head. That is why immediate operation must be undertaken to remove the blood clot and relieve the pressure

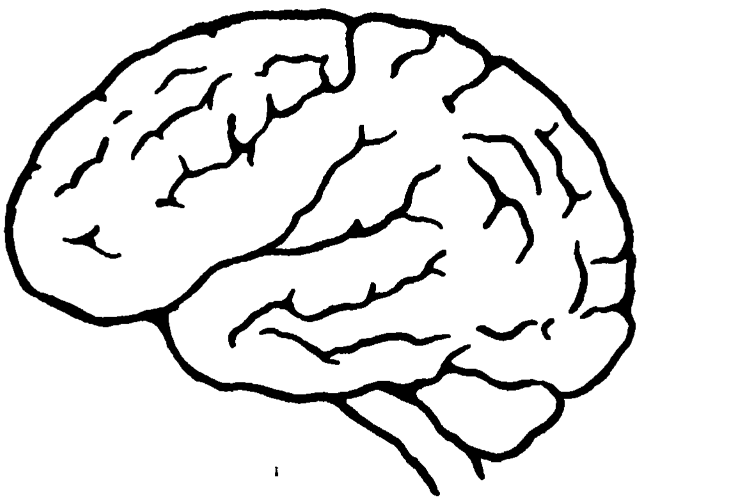
If there is any question, a doctor should be consulted and the patient hospitalized for a period of observation until the danger is past.

Older-age Injury

In the patient more than fifty years old, head injuries pose a different problem. Usually in this age group the head injury is less severe, and often goes unnoticed. As hardening of the blood vessels occurs in older people, it affects the blood vessels of the brain as well as the organs of the body. Hard and brittle blood vessels break and bleed easily.

Often the story obtained from an older person after a head injury is that he had a slight bump on the forehead when going down the basement steps or he struck his head on a door or beam This type of injury can be slight and almost forgotten It may not even raise a lump on the head or cause unconsciousness. But this little bump may break a blood vessel within the brain and start slow bleeding in a vein. The gradual accumulation of a blood clot on the surface of the brain may give these patients few symptoms. Because the clot forms very, very slowly, the brain tends to compensate. When the clot is large, it starts taking effect. The patient begins to feel sleepy, de-

(Continued on p. 5.)



Your brain is a most precious heritage. Do all you can to avoid head injuries.

YOU CAN

N. A. BUXTON, M.R.C.S., L.R.C.P.
and
D. K. DOWN

DO YOU like sickness? Do you enjoy pain? Do you want to die? Of course your answer is NO! No one likes the idea of sickness and death, and when disease strikes, the sufferer will take any remedy to cure sickness and prolong life. Everyone wants to live longer. But what is the secret of good health and longer life?

While medical science can offer wonderful modern remedies to those who have *become sick,* obviously the best plan is to *avoid sickness* in the first place. When we realize that most disease is caused by wrong living and bad habits, surely the most sensible thing to do to maintain health and life, is not to rely on medicines to cure our sickness, but to eliminate the bad habits that cause disease.

Every year millions of people die prematurely through the use of alcoholic beverages. Of course, very few people drop dead after swallowing a glass of liquor; because alcohol is a slow poison Its effects are not always felt immediately. But any intoxicating drink such as brandy, whisky, beer, wine, toddy, rum, etc., contains alcohol in varying quantities, and ALCOHOL IS POISON. Alcohol dissolves the fatty covering of the body cells, deranges the nervous system, places a burden on the heart, hardens the liver, and may lead to many serious diseases such as internal hæmorrhage, dropsy, ascites, severe neuritis, delirium tremens and insanity.

Even if it is not the direct cause of death, alcohol weakens the system, and makes the drinker more susceptible to other diseases. Many people who die of pneumonia, tuberculosis, high blood pressure, diabetes, and other diseases would not have contracted these diseases if they had left alcohol alone, and not undermined their health by drinking intoxicating liquor.

Even in small quantities alcohol is dangerous. One glass of liquor deadens the thoughts and slows down the actions. Many accidents and deaths are caused by faulty judgment and wrong decisions as the result of alcohol in even modest quantities Of course, unfermented grape juice, which is referred to in the Bible as "wine" (see Isaiah 65:8) is a harmless and nourishing drink. But those who want to be healthy and live longer should follow the Bible's command to leave intoxicating drinks strictly alone. "Look not thou upon the wine when it is red, when it giveth his colour in the cup, when it moveth itself aright. At the last it biteth like a serpent and stingeth like an adder." Proverbs 23:31, 32

Mahatma Gandhi wisely said, "If I were appointed dictator for one hour for all India, the first thing I would do would be to close without compensation all liquor shops, and destroy all toddy palms."

Another major cause of disease is tobacco. Whether cigarettes, pipes, cigars, or bidis are smoked, the result, in varying degrees, is the same. Different scientists who have given time to analysing the contents

"The Times of India," in its September 16, 1957 issue, in commenting, under Current Topics, regarding "pan" chewing, called pan a dangerous leaf The paper had good reasons for naming it so It reported that the Indian Cancer Research Centre Bombay, and the Indian Council of Medical Research had finally confirmed the widespread suspicion that chewing of the betel leaf and betel nut (pan and supari) is no less likely to cause cancer than prolonged and heavy smoking of the cigarette The paper also urged the Government to give full publicity in the interest of public health, warning the people against the risk they run in indulging this habit

However, through the READERS' VIEWS column of the "Times of India," September 19, 1957, the Administrative Officer, Indian Cancer Research Centre, Bombay, informed that although tobacco, lime and other spices, used with pan, may be responsible for causing oral cancer, there is so far no evidence at the Centre to suggest that any of the components of pan besides tobacco is likely to produce cancer

Dr A. K. Tulloch, F R C S., England, medical representative of one of the religious bodies operating among the people of the Pacific Islands, where betel chewing is widely practised, reporting on the narcotic effect of the nut, says "Betel nut contains a habit-forming narcotic, which accounts for the hold it gets on the people, and the difficulty they have in giving it up It also explains the mental deterioration which occurs after long usage"

LIVE LONGER

of tobacco smoke have found that it contains at least eighteen poisons Four of these, namely nicotine, prussic acid, carbon monoxide and pyridine, are deadly in very small doses. If a single cigarette is boiled in water for five minutes and the water then injected into a cat, the cat will die within three minutes One drop of nicotine placed on the skin of a shaved rabbit will cause immediate convulsions

The effect of these poisons on the smoker is not as sudden as the nicotine on a rabbit, because not all the poison in a cigarette is absorbed by the body, and that which is absorbed is taken slowly as the cigarette is smoked, giving the body system time to try to throw off the poisons. But though the effects are slow, they are nonetheless sure.

Smoking one cigarette usually increases the heart rate from 85 of 95 beats per minute This places an extra strain on the heart causing it to wear out sooner than it otherwise would No wonder more people are dying of heart disease today than of any other disease And this is particularly true of the smoker Statistics show that out of every 1,000 non-smokers, only ten will die of heart disease But out of every 1,000 smokers fifty will die of heart disease Statistics also show that heavy smokers can expect to die sooner than non-smokers Statistics gathered in the United States of America show that out of 100 non-smokers, an average of 66 will reach the age of 60 Out of 100 moderate smokers, 61 will reach the age of 60 But of 100 heavy smokers, only 46 can expect to reach the age of 60 In other words, the more a man smokes, the sooner he can expect to die

Tobacco poisons also interfere with the stomach and intestines No one should expect to cure a stomach or duodenal ulcer while he persists in smoking Inhaling tobacco smoke may produce a soothing sensation giving the smoker a certain sense of satisfaction. But this narcotic action of tobacco poisons is also having a detrimental effect on the smoker's nervous system. Experiments have shown that it reduces the ability to study, increases errors in working accuracy, and interferes with physical fitness and athletic ability No coach worthy of the name will permit smoking while athletes are training for some important event.

Smoking has a particularly bad effect on women. As a woman's nervous system is more highly organized than a man's, the effect of smoking is more drastic on women than on men That is why women usually smoke more than men once they start and why they find it even harder to give up than men do Smoking will spoil a woman's complexion, increase her nervous tension, and make her more susceptible to anæmia and other diseases, and will quickly ruin her feminine features The effect is particularly disastrous for pregnant women When an expectant mother smokes a cigarette, the unborn baby's heart shows an average increase of five beats each minute

(*Continued on p 28*)

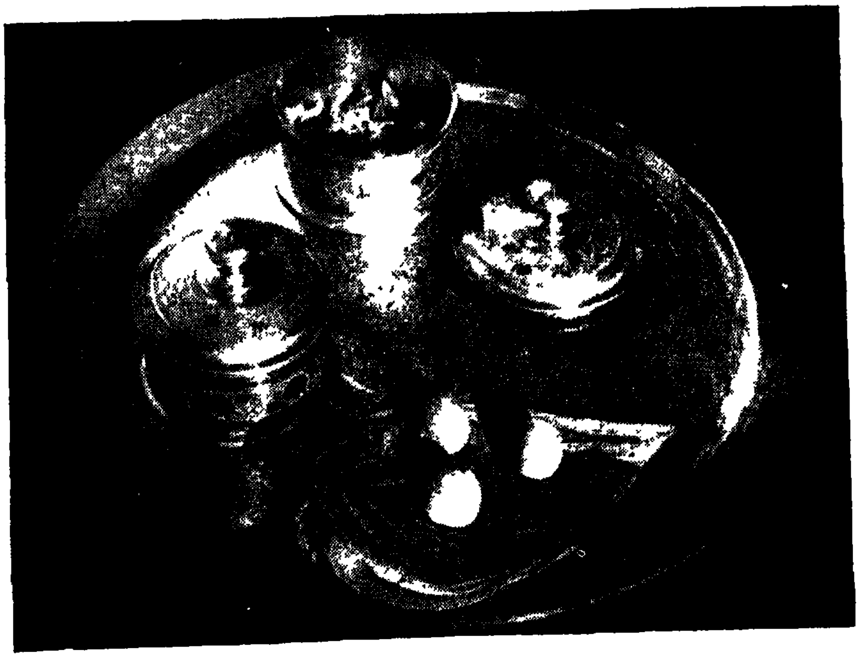


Photo A V Ramamoorthy

The betel leaf and the betel nut (pan and supari) are likely to cause cancer of the mouth.

PSORIASIS

STANTON B. MAY, M.D.

Whether PSORIASIS is caused by a nervous condition or a virus, it is not catching.

ONE or two people in every hundred have a common skin condition with an uncommon name—psoriasis. We read in the Old Testament of leprosy, a 'leper white as snow," but we wonder whether some of the people seen by the priests may not have been patients with psoriasis, for it, too, is characterized by whiteness—by thin white scales.

It is not difficult to diagnose psoriasis. Most doctors and even many lay people can identify it, because it has a typical eruption. The patient has white mica-like scaling on a reddened patch. It is usually seen over the knees and elbows in large or small patches, and may appear almost anywhere on the skin. The scalp, the nails, and the crotch areas are most commonly affected, the face usually being spared. Unique and interesting patterns may form, including rings that remind one of ringworm, a fungus disease. The patches are always dry, roughened, and scaling, but as a rule they do not itch. Occasionally the whole skin surface is affected, and then it becomes red all over, without much scaling.

Oily skin on the scalp called seborrhœa, or dandruff, seems to be closely related to psoriasis. In some cases the two merge. It is sometimes extremely difficult to tell whether a patient has severe dandruff or an early psoriasis. It is also sometimes wrongly diagnosed as ringworm of the crotch area. Thickened, pitted, or distorted nails may be caused by psoriasis, not a fungus infection.

Enormous sums have been and are being spent on research to determine the cause of psoriasis. As yet we do not know the exact cause. If psoriasis were more crippling, or fatal, more attention would be given to it by the public and the medical profession. However, it is unsightly, persistent and uncomfortable, and all physicians hope that the key to the problem will soon be discovered by intensive research.

Psoriasis usually appears between the ages of ten and forty-five. It is rare in coloured people. Many have only a few spots that remain unchanged for months and years. Some cases may clear up and give no further trouble. Others have large patches that persist in spite of treatment, or soon recur after treatment. Heredity seems to be a factor, for about thirty per cent of psoriasis patients have a family history of psoriasis. The patient having it is usually more healthy than the average person. Repeatedly I have seen psoriasis affect strong, athletic young men and beautiful young women.

All sorts of causes have been considered. Some feel that there is an imbalance of body chemistry, that the body does not handle the fats properly. Other food elements such as carbohydrates and proteins have also been considered. During the last two world wars, in the country where the diet was meagre there was less psoriasis, and those who had been affected often were greatly improved. Perhaps the psoriasis patient is overnourished! Other authorities believe that micro-organisms or internal infections cause the disease. Others consider it a nervous affliction. It is a common experience for a patient to tell a skin specialist that the condition appeared or spread after some nervous shock or stress. Glandular influences come to mind when some cases have cleared up during pregnancy.

"Doctor, is it catching?" is often asked. Because many skin diseases look bad, people think they must be contagious, but this is seldom true. There are not more than half a dozen skin conditions out of thousands that are contagious. Psoriasis is definitely not contagious.

Psoriasis often comes and goes, and it may be persistent, and stubborn to treatment. It is a chronic and in one sense an incurable malady, yet much can be done to alleviate and control it. It is im-

ortant for a patient to accept his soriasis and not take a self-pitying ttitude

Much depends on the patient to make every effort to clear his body f all spots and to treat any new pots as fast as they appear. Many atients give up the struggle and gnore their spots, doing nothing ntil they are covered with them.

Because psoriasis is a slow disease, the results of treatment are usually slow. Any line of treatment should be persisted in for several months before being given up or changed to something else The physician will usually start out with mild treatment, gradually increasing the strength of the medicine as he sees how the patient responds and tolerates the remedy.

Ointments can usually be stronger when a long standing psoriasis or small areas are involved. Strong salves and too much ultra-violet light may irritate the skin and the spots.

Treatment is often time consuming, messy, uncomfortable and expensive.

Nerves are a possible factor in flaring up psoriasis. Patients with a widespread case may often be helped by temporary removal to a hospital, where they are away from disturbing influences. Sedatives sometime help. Removing the patient from his usual environment for a few weeks may accomplish what weeks of office or home treatment cannot accomplish.

Sunlight is one of the patient's best friends. Exposure to the sun or to artificial ultra-violet light helps most patients. One patient of mine would always clear up her psoriasis with sun baths. When she sunbathed regularly, her spots would leave in a matter of weeks. When she discontinued sun-bathing, her psoriasis would re-appear.

Sunlight is not helpful in most skin diseases, but most physicians can testify that sunlight or ultra-violet light, plus tar application in salve or liquid form, gives the best results It should be avoided, however, in new cases or those whose psoriasis is spreading. Chronic cases should have a prolonged course of the treatment. Tar is very effective, in spite of its odour and colour

X-ray treatment to minor areas for a limited period of time is a clean and effective treatment, especially for new cases and cases having scalp and nail involvement Arsenic, a frequent old-time remedy, is now seldom prescribed

Friends, family, and advertisements constantly besiege the psoriatic patient to try every conceivable remedy, but most of the suggestions are valueless, and may even be harmful Their failure only makes the patient more sceptical. Because of the slowness of treatment recognized by the medical profession, it is not hard for us to understand how easy it is for the psoriasis patient to get desperate and try almost anything. He will do best if he can take a relaxed attitude toward the whole problem, think of it as a birthmark, and keep hoping that soon our scientists will find the answers.

He will be wise to let his doctor try to control the skin spots and find out what types of treatment help the most. The mildest and slowest treatment is usually the best. The psoriasis patient must look upon the sun as his best friend.

Things to remember about psoriasis:

1 Learn to live with psoriasis and to accept it as you would a mole or a birthmark. Fighting it only makes it worse Try to keep your emotions and your nerves on an even keel. Worry often causes psoriasis to spread

2 Slow, non-irritating treatment is best Don't be impatient and expect to get well in a few weeks' time It just can't be done, and it is dangerous to try. Learn what helps you the most, and stay by it.

3 Go to a competent physician for treatment. Don't try self-treatment offered by relatives, friends, quacks, and advertisements. Your doctor will know of the latest advances, and use them if he thinks they will help you.

4 X-ray is valuable if used by a physician trained in its use. Do not go from doctor to doctor asking for X-ray treatment. If you must change doctors, be sure to tell what X-ray treatment you have had Your skin may be permanently damaged by too much X-ray.

5 Diet plays a minor role in psoriasis Don't go in for fad diets Avoid alcohol—it may spread psoriasis at certain stages.

6 Remember sunlight and ultra-violet light, particularly when used in connection with tar medicines, are the best single remedy Get all the sunlight you can, and in winter use sun-lamps under your doctor's direction. The more severe your condition, the more careful you must be with any light treatment.

The Too Common Cold

HUBERT O. SWARTOUT, M.D., Dr. P.H.

THE man who invents a sure way to prevent colds, or a dependable quick cure, can soon be a millionaire. Few of us escape having at least one cold a year, and we would gladly pay a substantial amount of money to avoid the nuisance and discomfort that come with it.

I once saw a rather humorous statement in an English publication. "A cold can be cured in two weeks by almost any popular treatment, but it will subside in a fortnight if you let it alone."

It is quite likely that the cold was so named because people believed that getting chilled was the chief cause. Actually, the temperature of the air or the state of the weather has little to do with causing colds; other factors are much more important. An isolated group of people living in a frigid region goes through the coldest season completely free from colds, but develops them promptly when moderating temperatures invite visitors from the outside world. A study of colds from this and other points of view has led to a general agreement that they are contagious and that their immediate cause is one or more of a group of viruses

This discovery aroused the hope that a vaccine to immunize people against colds might be developed. Thus far no virus vaccine has done any measurable good in preventing colds. In some virus diseases the malady itself produces a lasting immunity A cold may build up a brief immunity in some people, but patients can and often do have another cold within a few weeks or months after recovering from the previous cold.

This is not to say that all so-called cold vaccines are useless. Mixed respiratory vaccines are rather widely used, and doubtless do some good. But they are not virus vaccines at all. They are made from several of the common bacteria, or germs, that are present in our air passages and that take hold and cause many of the symptoms that develop after the onset of a cold. These medicines may help shorten the course of a cold and prevent some undesirable side effects or after effects.

Since at present there is little or no hope of building specific resistance against a cold virus by means of vaccination, we must maintain a high level of general resistance and body vigour. This means giving attention to balanced diet, exercise, rest, cleanliness, protection from the elements by proper clothing and housing, and other hygienic measures. If we know what happens in the body when it is attacked by the virus and what the body does to resist the attack, we can help these natural body activities and so decrease body damage and hasten recovery.

The onset of a cold is generally marked by lassitude or weakness, chilliness of some parts of the body, perhaps fever and headache, nasal stuffiness and discharge, and sneezing. There may be some throat irritation which may cause coughing.

The lassitude that often accompanies a cold is frequently caused by the poisonous effects of the virus.

Chilliness is a sensation caused by the nerves in the skin. It is the result of circulation disturbance, which cuts down the supply of blood to the skin and extremities This same disturbance of the circulation leads to general body congestion, with an increased supply of blood and a sluggishness of its motion through the blood vessels. This condition helps to cause the headache and nose and throat distress.

So far as the lassitude is concerned, it is not wise to force a tired body to keep up normal activity. Rest is needed, and bed rest is best.

The body seems to overcome the cold virus rather quickly, for the contagious stage of most colds lasts but a few days, usually not more than three or four. But the power to fight disease germs comes from freely flowing blood, so the circulation disturbance must be overcome to relieve the headache and other distressing symptoms and hasten

ll recovery from the attack of the old virus.

Various methods have been used to bring blood back to body parts and reduce both the congestion and the stagnation in other parts. In the days of our grandmothers a sweat was often given to break up a cold. Such treatment brings blood to the entire body surface and speeds the circulation. This old treatment has a rational basis, and reviving it would be far from a bad idea.

Numerous drugs have been used as cold remedies. The most common is probably aspirin, alone or in combination with other drugs. Whisky, rum, gin, and other liquors, either alone or in various combinations, used to be widely recommended. Aspirin tends to cause sweating. Taking alcoholic beverages is followed by a dilation of the blood vessels of the skin, as is evidenced by the flushing of the face. Any apparently beneficial effect on a cold would be due to this fact.

There is insufficient space in this article to discuss the effects of all or even a fair fraction of the current common cold remedies. It is far more important to try to clear up the question as to whether drugs or natural remedies are better.

It is obvious that the curing of the cold is not the only factor to be considered in choosing a remedy. Many remedies that are more or less successful in curing colds must be rejected because they produce side effects that are undesirable or even harmful. This is the case with most drugs, even aspirin, which is generally considered a harmless medicine. Aspirin may be poisonous to babies and in certain cases there may be damage to the hearts of older people. Some people should never take it at all, and the less taken by anybody the better.

When it comes to alcohol, in whatever form, it is still alcohol, and is subject to all the drawbacks of alcohol. In our day, alcohol is seldom used as a cold remedy except by persons who want some excuse for taking it without giving their real reasons.

The intelligent use of heat, preferably moist heat, applied to large parts of the body to overcome chilliness and congestion will help the circulation better than any drug, and do it in a better-balanced, more controllable way, at the same time being free from the danger of harmful side effects. Hot blanket packs, fomentations, foot and leg baths, and other hydrotherapy measures should be used to replace alcohol and drugs in our treatment of a person with a cold. Milder moist warmth over a longer period of time can be obtained by a variety of heating compressess left on for several hours or overnight. A heating compress to the throat often helps greatly to relieve sore throat and cough. It takes study and practice to use these treatments properly, but the effort is well worth while.

The need for rest, especially early in the course of a cold, cannot be overemphasized. This should include not only rest of muscles but rest of the vital organs as well. Bed rest will automatically reduce the burden on heart and lungs, but rest for the digestive organs can best come by taking a light diet of easily digested food. It is well to take only liquids, especially fruit juices, for a few days.

If bed rest tends to cause constipation, or if constipation is present from any other cause, the large bowel should be emptied daily. Free use of fruit juices may bring about this result, but if not, warm saline enemas gently given can be recommended. No harsh laxative should ever be used.

This may sound like taking a lot of trouble about "just a cold," but the attack can be shortened and serious complications forestalled. The advantages of avoiding the harmful side effects so likely to result from drugs more than justifies the trouble. Use of proper preventive measures, together with the natural type of treatment, will go a long way toward making the too-common cold less common.

The medical world was all astir when Dr. Winston H. Price, a 34-year-old John Hopkins University scientist, disclosed recently that he had developed an effective vaccine for the common cold.

Dr. Price of the Hopkins School of Hygiene of Public Health claims that

(1) he has succeeded in isolating the first "true" virus of the common cold—one responsible for 30 per cent of the cases he has studied over a two-year period; and that

(2) he has developed a vaccine which in controlled tests on more than 400 persons, prevented colds caused by the "JH virus" in 80 per cent of the cases.

Declining to answer any questions about commercial production, Dr. Price indicated that there is a good possibility of mass-producing the vaccine.

Immunity is produced from two shots of the vaccine, the second following the first by four weeks, Dr. Price said. However, he expressed his inability to say how long the immunity would last.

Inasmuch as the vaccine was made from killed JH virus, the vaccine, Dr. Price said, did not produce any symptoms, discomfort or side effects whatsoever in persons who received it.

Dr. Price said that because common colds are caused by an unknown number of viruses, his vaccine could not be expected to be effective against all of them.

The JH virus was grown and the preventative was prepared by techniques similar to those used in developing Salk polio vaccine and older vaccines of other types. Once grown, the virus is killed with formaldehyde, a process requiring a week and a half. This process has to be long enough to kill the virus but not long enough to kill the vaccine's effectiveness.

Hobby Health Insurance

VICTORIA HATHAWAY, R.N.

A hobby will give you satisfaction and help release pent-up energy and tension.

WOULD you swap high blood pressure for the fun of raising African violets? Would your husband rather build furniture in his spare time than suffer from vague digestive troubles? Have you a friend who would consider side-stepping asthma by relaxing sufficiently to give time to fishing and sailing?

Are these odd prescriptions for avoiding physical ailments? No, says a Washington, D.C doctor. Hobbies have been found to do more than fill our free time. They definitely form health insurance, and can prevent some illnesses traceable to nervous tension.

A physician who practises what he preaches, Dr William T. Gibb, Jr., of George Washington University, devoted much research to the effect of hobbies on the health of his patients. Over a period of years it became increasingly evident to him that usually people with neurotic complaints, high blood pressure, peptic ulcers, or other diseases associated with emotional tension and anxiety had no true hobbies. On the other hand, he noted that people with absorbing hobbies were singularly free from these ailments. Why? Because suitable hobbies supply what our highly specialized working day may lack.

From a hobby we may get a feeling of fulfilment, a chance to be creative, or we may simply smooth out kinks we acquired during the day by relaxing into a different activity

Unlike our ancestors, who worked a great deal with their hands and had to have many skills and trades, the work we do today is narrow and detailed.

If we need a new suit, we may order one. We do not shear the sheep, weave the cloth, dye the material, cut the pattern, or sew the garment!

We use pre-sliced bread, electric stoves, and prepared cake mixes.

Despite all the labour-saving devices we now have, life is complex. It was simpler as a whole and perhaps more satisfactory a generation ago, because the workaday activities were less specialized. Business and professional efforts were on a much smaller scale. If a man owned a business, he was his own bookkeeper, salesman, window dresser, buyer, and executive. He even wrote his own advertising copy.

Today we may find ourselves in a business field not entirely to our liking. The standards are usually set by others. A person who is a perfectionist will be unhappy because he isn't satisfied with the quality of his work. The person of imagination may feel hemmed in The timid and insecure person suffers from lack of stability and permanence.

So, our tensions develop. If they persist, a background for hypertension, peptic ulcer, asthma, or other illnesses is built up. A person must have a definite sense of accomplishment and a means of self-expression if he is to remain in good mental health.

The housewife is not immune to these troubles. Though her activities are diversified, they are spread too thin. She may have to keep a neat house without help plan and cook tasty nourishing meals for her entire family, and keep a keen eye on the health, education, social life, and religious training of her children. She is called on for community needs, and of course must be a companion for her husband She, too, needs an interest outside her daily chores that will refresh her mind and point of view.

Most of us think we haven't time for a hobby. Dr. Gibb likes to remind us that we can't be busier than Winston Churchill, whose oil paintings, started as a hobby, have received worldwide notice. He is also an expert brick mason.

A great many successful people are avid hobbyists. One of our great trial lawyers traced the history of the Indian tribes as a spare-time pursuit, and as an expert frequently lectures to historical societies.

A prominent New York physician finds relaxation in studying mushrooms. He has written an authoritative book about them.

An executive in the motion-picture industry gets away from daily tensions by cutting and polish-

ing semi-precious stones in his workshop.

Dr. Gibb believes that using our hands in our hobbies is the best antidote for the mental work many of us do during the day. To those who say they cannot do a thing with their hands, Dr. Gibb points out that anyone able to tie knots in his shoelaces or button his clothes has sufficient manual dexterity to do about anything he wants to with his hands. But he must expect to put in a lot of practice before results will satisfy him.

Whatever hobby we choose, we must get it under way before any of the diseases of tension hit us. A hobby may prevent such illnesses, but it will not cure one.

"Unfortunately, by the time a person develops one of these diseases his habits of life have been established. His personality is too rigid to accept or develop a hobby in a full sense.

"Over a period of years," Dr. Gibb said, "such a patient has squashed any impulse he felt would interfere with his pursuit of being successful—he has considered an absorbing interest outside of work a waste of time. He got into health trouble because he had no outlet for increasing tensions."

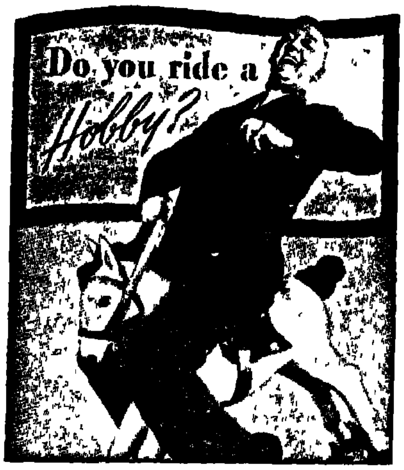
Frances and Bob live in a new community of young married couples. Their small semi-detached brick house has a pocket-size front and back yard.

The front yard is kept blooming with flowers by Bob. He also tends tomato plants in the back yard, assisted by John 6 and Peggy 4. They all look forward to seeing the new winter-blooming roses, and are discussing where to plant the lilies of the valley for spring

"How do I feel about Bob's gardening!" exclaims Frances. "Why it fills his lungs with fresh air. After taking studio pictures indoors all day and spending hours in the photography darkroom, fresh air and sunshine are just what he needs."

Frances keeps house, shops at the supermarket, and attends club meetings Usually Frances has an after-club snack with some of the other housewife members, and all return to their homes in a better frame of mind for their house cleaning and laundry duties Their tempers are sweeter, and they are more cheerful with the little ones

May we look forward to earning money from our hobbies? No, says Dr. Gibb, for if we should come to depend on this income, we would automatically cease to have a hobby and would be operating a secondary business.



Dr. Gibb also cautions us not to elect a hobby that would require more of a financial outlay than we could comfortably afford.

Your library can supply you with ideas. Any large newsstand has publications devoted to hobbies.

Dr. Gibb suggests we adopt an activity quite different from the work we do. It should be a definite part of our scheme of living. If we turn to building or collecting, we should have a space set aside in our homes for it. It is important that we feel free to pursue our interest as we may please, with no deadlines to make or regulations to follow.

Any activity that gives us a real sense of accomplishment or releases pent-up energy qualifies as a hobby, Dr Gibb explains. He suggests participation in neighbourhood orchestras, civic activities such as slum clearance.

"Home workshops are booming," the physician says. "Practically every hardware store carries machine tools for hobbyists, produced in such quantities that their prices are extremely reasonable"

It may be argued that people who pursue hobbies are fundamentally well-adjusted persons, and therefore not subject to disorders stemming from tension. Dr. Gibb does not believe this is true. He has seen many withdrawn, sensitive people, who might otherwise have had ills of tensions, spared such ailments because their hobbies gave them satisfaction and a feeling of fulfilment.

Dr. Gibb's interest in hobbies began thirty years ago. As an outgrowth of his youthful interest in sailing, he now makes ship models Three beautiful full-sailed models are displayed on his office bookcases Becoming interested in art while doing laboratory drawings as a medical student, he now paints water colours, one of which has won an exhibit prize.

Dr. Gibb strongly believes hobbies should be encouraged in children, for it is during childhood that we lay a basis for future interests.

But what is good for the child is good for the adult too, he stresses.

Take up a hobby now. Don't wait until you are too brittle and rigid, and don't expect perfection right away. Don't be tempted to quit because of the pressures of business.

"If many patients had developed a hobby years before they needed medical help, they wouldn't be seeing me today," Dr. Gibb concludes.

"Collect something or do leather tooling—take on any hobby that really appeals to *you,* and work at it. You will be winning out over your arteries and keeping young!"

PREVENTIO

DR. K. C. (

Professor of A

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IN PRESENT day economy, the most important item to be considered is personal health. Right from the richest to the poorest, everybody is keenly interested in good health, and not only in good health, but also in positive health.

The progress and prosperity, the wealth and peace of the nation, is dependent on the health of the individual, whether he may be a villager or a city dweller, a labourer or an industrialist, a poet, a politician, or a member of the police force.

It is always said, with underlying truth in it, that there is a "sound mind in a sound body." To have a good positive condition of health one must be free from disease. A disease means any deviation from the general state of good health.

In these days of advance in the field of medicine, cure from any minor and major ailments like malaria, or pneumonia, has become a surety, and a very grave outlook has been changed to a minimum of risks in diseases like typhoid, which in the past, took a heavy toll of lives. Similarly, it is the case with tuberculosis and diabetes.

However, one should not rest satisfied with the present accomplishments, nor should they make one complacent One should understand and realize that "prevention is better than cure" and this can be achieved by the application of a knowledge of the causes of diseases in preventive aspects, and by educating the public by means of lectures, posters, pamphlets, cartoons, films, and the like.

Of the common diseases affecting human beings, anæmia occurs most frequently Anæmia means a reduced amount of hæmoglobin and/or the red cells of the blood. The function of the blood is chiefly to supply oxygen and nutritive materials to the tissues. Also, with the help of its other elements, it works to prevent or remove infection; that is, it helps in recovery from disease. Naturally, the capacity of these functions is reduced by anæmia.

From infancy to old age, both sexes, and all classes and races suffer from anæmia.

To understand the causation of anæmia, one should try to understand the two processes, which are constantly taking place in the body the destruction of the old blood cells, and the formation of the new

The formation of new blood, particularly of its red cells, takes place in the cavities of the bones of the trunk of the body, and these cavities are called bone marrows In other words, a bone marrow is a factory where red corpuscles of the blood are manufactured. In the manufacturing process certain raw materials are required; namely, iron, proteins, vitamins (like folic acid, B_{12}, Vitamin C) and other materials of minor importance. Of these, iron and proteins are of the highest importance in building hæmoglobin The tissue cells in the marrow multiply and re-duplicate, and during this process, the cells are loaded with hæmoglobin, and finally red blood corpuscles are produced. The red cells thus manufactured, are now ready to enter into the blood stream and be circulated to all parts of the body. The cells themselves separate from each other, and move into the circulatory system to perform their body functions. This whole process can be considered similar
the industry of ship-building in t
docks. No sooner is the ship rea
than it glides into the sea, ready
service.

Ordinarily, an individual
quires, and takes in his diet, a
proximately 15 mgs of iron p
day. About 1 mgm is lost da
from the body through urinati
This is absorbed from the duode
part of the intestine and carried
the blood and on to the marr
factories. Food articles, chie
vegetables and cereals, supply t
quota of iron.

The other element necessary
hæmoglobin is protein. Prote
are particularly deficient in
vegetarian diet. Milk and cere
form the chief sources of prote
to a vegetarian. A rich source
protein is skim milk powder.

It must be mentioned empha
cally that to supply the necess
elements through food, in a case
anæmia due to an inadequate su
ply of iron and protein, is costl

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DIRECTOR,

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and takes a longer time than when iron is given in medicinal form by mouth. Ferrous sulphate or ferrous gluconate, given by mouth, will cost hardly a couple of pice a day, while food to supply the same amount of iron will definitely be costlier.

Now then, it is very easy to understand that anæmia is caused by either of the following two conditions:

1. The production of less red blood cells in the bone marrow This may be due to defective machinery in the bone marrow, or due to a want of adequate raw materials, like iron and protein. In most cases the want of materials is the cause of anæmia. Conditions like pregnancy, a period of growth and development of the body, or sickness, may increase the demands for these materials.

2. Anæmia can be produced by heavy loss of blood from the body. The red cells, formed in the marrow and entering into the circulation, are known to live about 120 days; that is to say that the average life span of a red cell is 120 days At the end of that period they are broken up and the iron contained in them is taken away by the body to be utilized in the formation of new cells. The body behaves most economically in this respect, and the process is similar to the removal of costly ornaments from a dead body before its creation or burial

Excessive loss of blood occurs through a severe bleeding; as a result of accidental injury or due to small repeated bleedings like that of bleeding piles, or of menstruation or excessive and frequent menstruation However, one of the most important conditions present in this group is the chronic small bleedings in the intestines due to the presence of small worms known as hookworm. This condition is known as ankylostomiasis

A hookworm is called a hookworm because its shape is like a hook It also sticks to the wall of the intestine like a hook Its size is very small, varying approximately from ¼″ to ¾″ It is whitish in colour, and is generally present in the body in a good number, varying from a few to a few hundreds.

They lodge themselves in the upper part of the small intestines, and constantly suck the blood, their mouths also serving as hooks Due to a chemical substance secreted from their mouths, the blood oozing from the intestine wall does not clot and seal the wound. And so it bleeds continuously, although the amount may be very insignificant. Due to this chronic loss of blood, and because of the improper absorption of food through the intestinal walls, and also because of the presence of these worms, anæmia is caused.

These worms are most often found in people who are employed in farming, and are living in villages Hookworm, I think, is the greatest menace to the farming population and villagers However, people residing in parts of the city where hygiene may be defective, may also have these worms.

The worms in the intestines lay their eggs which pass into the stools Outside the body, due to moisture and proper humidity, these eggs develop further and the young worms known as larvæ, hatch out, then they re-enter the body through the skin of the feet and legs of those who walk bare-footed, and reach the lungs, via the blood, and then on to the intestine, where they develop into adult worms and by their habits cause severe anæmia

This problem of anæmia due to hook worms in villagers and people of agriculture, is a problem of as grave importance as malaria and tuberculosis

The prevention can be achieved by improving the hygiene of the villagers: That is by prohibiting the habits of defaecating on open lands and by educating the people as to the dangers of the disease and by providing them with latrines and proper sanitation They should also be instructed not to walk bare-footed but to put on shoes. Finally, the people in villages must be treated *en masse* with drugs to remove these worms and thus stop the source of infection

Again, I would emphasize the gravity of these worms and appeal to the health authorities, to pay as much attention to hookworm as they do to malaria and tuberculosis.

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AHMEDABAD

Plastic Surgery for

Injuries and Blemishes

WILMER C. HANSEN, D.D.S., M.D.

IN THE previous articles on plastic surgery I attempted to picture the miracles that modern-day advances have made available to people everywhere. New medicines, new instruments, and new techniques are the means in the hands of the plastic surgeon for taking much of the sting out of deformities and disfigurements, whether in infancy, youth, or old age.

In this day of fast traffic on the ground and in the air, accidents are becoming more common. With the ever-increasing rates of speed the injuries are more severe. Many injuries result when the victim is thrown against the steering wheel or dashboard or is hit by flying glass. Accident victims are usually treated in emergency hospitals, where the prime concern is to save the patient's life, with little concern for the cosmetic result. Most of these patients are referred to a plastic surgeon a few months later to have their scars removed and facial deformities corrected.

Injuries often include fractures of the facial bones. These are best treated in the first few days after the accident. Sometimes large portions of bone are crushed or lost. Successful reconstructive surgery must include bone and cartilage grafts.

Another frequent aftermath of accidents is the severed facial nerve, which results in a drooping of the eyelid. Also after accidents or after the removal of tumours from a gland near the ear, there is a one-sided facial paralysis. By using a strip of fibrous tissue from the patient's thigh, the plastic surgeon is able to do a great deal for these persons.

The drooping eyelid can be connected to the muscle of the forehead by a strip of fibrous tissue in such a way that the patient can train himself to raise the involved eyelid by raising the forehead.

In facial paralysis the surgeon cannot restore function to the face, but by the use of fibrous tissue strips he can lift the drooping facial tissue up to a level where the patient has a very normal appearance when his face is in repose.

Unfortunately, children are perhaps more prone to serious burns than adults. There is the infant who spills a pot of boiling hot soup, the toddler who has not yet grown to fear a hot stove, the kindergarten child who vents his curiosity on a box of matches, the youngster with his first chemical set. The result may be a first-degree burn (inflamed skin), a second-degree burn (inflamed skin with blisters), or a third-degree burn (outright skin destruction).

There are two common methods of treating third-degree burns, one old and one new. The old method involved covering the area with greased gauze and heavy pressure dressings. The new method (which is gaining considerable favour where facilities are available) reverses this traditional treatment by leaving the area and the patient completely uncovered, allowing a heavy scab to form.

Whichever method the surgeon chooses, the heavy scabs eventually have to be removed and skin grafts applied after a period of one week or longer in moist, irrigated dressings. This is for the purpose of controlling infection and developing a clean surface that can sustain the skin graft. The procedure usually is to follow the open method for about three weeks, after which the crust is removed and a skin graft applied to the burned area as soon as a healthy surface has developed.

With newer techniques, the plastic surgeon is able to have these patients grafted and out of the hospital in a matter of a few weeks. At the same time they have considerably less scarring than patients had by the old method, when they were hospitalized for months.

Prognathism is medicine's technical name for an abnormally jutting jaw, which is not only cosmetically unflattering but also functionally poor. In this condition the lower teeth do not mesh properly with the upper teeth. Obviously the purpose of any operation is to reduce the lower jaw, so that it can be brought into alignment with the upper jaw. In older persons especially this align-

ment is important. Without it, the patient's dentist faces an almost impossible task of fitting dentures properly.

On the other hand, there are patients with under-developed jaws, whose chins do not project outward far enough. This is cosmetically distressing to the patient. Often a bone graft or a cartilage graft is all that is required to correct this deformity. In extreme cases the jaw bone itself has to be lengthened, then the surgeon makes a bone graft or a cartilage graft.

One of the most dramatic examples of how crucially important this correction can be is exemplified by a young man patient. His almost non-existent chin had turned him into an introvert who avoided any kind of friendship, particularly with the opposite sex. Without plastic surgery he would have been sentenced to a life of frustration. Thanks to modern techniques, a chin was built that gave his face and his personality an entirely new look of strength and confidence. Today he not only has a good job but has also married and established a completely happy marital relationship.

As a rule, bone to be used in re-constructing a jaw is obtained from the crest of the hip bone, which has a natural curve that can be utilized in forming the jaw. When an excessively receding chin is being corrected, the plastic surgeon sometimes makes steplike lengthwise cuts in the horizontal portion of the jaw. The front part of the jaw is brought forward, bone grafts are fitted into the small spaces thus formed, and the fragments are held together with a small stainless steel wire. For six to eight weeks the patient's teeth are wired together in a manner similar to the way a broken jaw is treated. Either fixed or removable bridgework is fitted to the patient's teeth to fill the spaces thus created. This alone may be all that the case requires, as only the most severe cases require both procedures.



B Ranganathan

Injuries and blemishes need not mar you for life

Psychiatrists and pediatricians agree that nothing endangers the development of a normal childhood personality more than a disfigurement or deformity of the face. Rather common among these disfigurements are birth-marks.

In colour, birth-marks vary from brown and black to fiery red and purple. They typify two distinct forms. The brown or black type is known as the pigmented form. It may vary from a small mole to a wide expanse of brown pigmentation perhaps covered with coarse hair. The reddish and purple types are known as hæmangiomas. Basically they are tumours of blood vessels filled with blood, hence their colour. They may vary in size from practically pinpoint to massive blankets of red covering large areas of the body.

Recent studies of pigmented birth-marks indicate that a certain small percentage tend to undergo malignant changes, and that these changes appear to be hastened if the mole is exposed to constant irritation. In woman, common areas of irritation are locations under

(Continued on p. 27.)

VITAMIN CHART (PART II)

VITAMIN	WHERE FOUND	FUNCTIONS IN THE BODY
B, Or Folic Acid	Is fairly stable but will be destroyed if heated.	Is effective in the treatment of pernicious anaemia, sprue and other anaemias associated with pregnancy.
PANTOTHENIC ACID	Found in most living tissues	Is believed to prevent dermatitis, aid normal growth of hair. The results of deficiency of pantothenic acid are unknown probably because almost any diet contains a sufficient amount.
C Or Ascorbic Acid	Widely distributed in natural staple foods especially among fruits, particularly citrus fruits	Essential for normal growth, development and maintenance of practically all body tissues, especially those having to do with joint structures, the ligaments, bones, teeth and gums Deficiency leads to weakness, anaemia, haemorrhage under the skin, tender bleeding gums, etc., which are characteristic of scurvy
D Or Calciferol	Natural food sources of vitamin D are meagre.	Essential for normal growth and development Promotes use of calcium and phosphorus in formation of bones and teeth. Especially needed for infants, children and women during pregnancy, and lactation Deficiency leads to rickets in children and osteomalacia in adults.
E Or Alpha Tocopherol	Is found in the germ of cereals, leafy vegetables and milk Is easily destroyed by rancid oils and fats and lard.	Essential for normal reproductory functions. Vitamin E is believed to help us absorb more of A Deficiency in men may lead to sterility and in women to repeated abortions. In infants it causes brain damage, which may result in paralysis.
K Or Menadione	Abundantly found in greens. Is soluble in fats. For good absorption in the body, bile is essential	Aids normal clotting of blood thus preventing haemorrhage. Deficiency may result in either insufficient bile salts in the intestines, such as occurs after obstruction of the bile duct or of various intestinal conditions such as intestinal obstruction, surgical short-circuitings, dysentery and sprue.

VALUABLE SOURCES	RECOMMENDED DAILY ALLOWANCES	
Green plants Yeast	Experiments are not conclusive	
Yeast Milk Whole grain cereals	--do *N B*—There are other B group vitamins such as Biotin, Choline, Inositol, but experiments on these -more than regarding the above three vitamins—are so inconclusive that nothing can be said except the food supplying enough of Thiamine, Riboflavin and Niacin will tend to provide sufficient of the remaining B vitamins	
Oranges Lemons Grapefruit Tomatoes (raw or canned) Potatoes Green leafy vegetables Mossambes Pineapple Mangoes Strawberries Cantaloupes	ADULTS	75 - 100 mgs
	CHILDREN	
	1 - 6 years	30 - 50 "
	7 - 10 "	50 - 60 "
	10 - 12 "	75 "
	Approximate Values	
	Orange juice ½ cup	60 "
	Grapefruit ½ cup	50 "
	Tomatoes, fresh (1 medium)	30 "
	Tomato juice (½ cup fresh or canned)	30 "
	Baked potato (1 large)	12 "
	Green cabbage (1 cup shredded)	40 "
Fish liver oil Low concentration in egg yolk, cream, and butter Milk may be enriched. Sunlight or ultra-violet rays from special lamps acting on the skin.	ADULTS	400 - 800 I U
	CHILDREN 1-1? years	400 800 "
	Approximate Values	
	Milk, whole fortified with Vitamin D (1 quart)	400 "
	Standard fish-liver oil (1 teaspoon)	300 " or more
Wheat germ oil Cotton germ oil Lettuce	Experiments are not conclusive	
Spinach Cauliflower Cabbage Tomatoes	The requirement is usually satisfied by any good food except for the infant in the womb and for the few days after birth. Supplemental vitamin 'K' is advised during last months of pregnancy and immediately after birth	

STORY TIME

THE KITTEN THAT NOBODY WANTED

THE kitten that nobody wanted crept timidly into Aunt Safie's back yard. It made its way toward Tabby cat and her three babies. Tabby plainly didn't like the looks of the stranger, for she arched her back and spat. It seemed as if she were saying, "Get out of here. You're dirty and ugly. We don't want you."

Her manner was so threatening that the kitten stopped. When it stopped it fell over on its side because it was so weak. It was then that Prakash saw it.

"You poor, tiny thing," he cried. "Where did you come from? You look almost starved to death." He knelt down beside it.

Aunt Safie glanced out of the window just then. "Oh, Prakash, don't touch it, please," she called "I'll be out in a minute."

She came quickly. "It surely is a pitiful wee thing," she said as she gingerly picked it up and dropped it into the pen that had been made for Prakash's pet lamb. "Be sure not to touch it," she warned again. She stood looking at the kitten as it lay there on the grass, too tired and discouraged to try to get up. "It's a shame that people don't do away with a cat in some merciful way when it is no longer wanted," she said. "We'll leave it there until Dassu gets back."

Prakash sat down beside the pen as close as he could get. "I think it would like something to eat," he said. "May I give it some milk?"

"Why, yes, of course," answered Aunt Safie. "We don't want it to go hungry while it is here." She went to the house and soon returned with a small pitcher of milk. She poured some into a saucer that she found near by. The starved kitten lapped it up eagerly and lay down to sleep.

"I'm so glad that it came to us when it needed help," said Prakash. "We'll be good to it, the poor thing, so tired and sick."

"It really seems more starved than sick," said Aunt Safie after looking at it closely for a few minutes. "No doubt food and rest will do a great deal for it."

Prakash played close to the pen, all the time keeping a watchful eye



on the kitten. By and by it awakened, and made its way to the saucer. "It wants more to eat," he called to Aunt Safie.

"Feed it as often as you wish," she answered, "but not too much at a time. It would not be wise to give it all it wants just now, because it is so starved."

Prakash poured more milk into the saucer. Once again the kitten drank and then lay down to sleep.

So the morning passed. Many times Prakash fed it. During the afternoon he called to Aunt Safie, "I think it feels lots better now. It's walking all around, and it's even trying to play a little."

Prakash then began talking to the kitten. Aunt Safie stopped to listen. She was surprised at what she heard him say: "Don't worry, you precious little kitten. Aunt Safie will make you well. She doctored Old Billy's knee, and now you'd never know that there ever was anything wrong with it. Of course, Cousin Dassu helped her some, but then I know that she did most of all for it. She'll put some medicine on you, too. I'll ask her."

Aunt Safie twisted her lips into a funny sort of smile. "I might as well do it now as later," she said to herself as she went to look for the medicine bottle.

Prakash was delighted when he found out what Aunt Safie planned to do. "Why, I just got through telling kitty that you'd make it well." He gave her a tight hug. "I do love you so much," he smiled.

Carefully Aunt Safie poured some of the brown liquid onto each sore. The kitten seemed to realize that it was being helped and stood very still.

"There," said Prakash as Aunt Safie finished. "It'll soon be as pretty as Tabby herself."

Upon hearing her name mentioned, Tabby came up to Prakash and rubbed her back against his leg. She wasn't the least bit interested in the kitten. In fact, she acted as if she didn't see it, until the little thing started to walk toward her. Then she spat at it in the most impolite way, as she had done when he first saw it.

Prakash scolded her soundly. "Why, Tabby," he cried, "that's



no way for a nice cat like you to act. If somebody should treat your pretty babies so, how would you feel?"

Aunt Safie smiled. "Tabby is acting like some people I've met. Now if this kitten were clean and well fed, no doubt Tabby would be more friendly."

She looked first at Tabby and then at the kitten. She sighed softly. "I don't want this tramp kitten," she thought. "We already have four cats and they are enough. Her mind was made up. She would ask Dassu to do away with the unwanted wee thing the next morning before Prakash was astir. She didn't like to do this, but there seemed no other way. Prakash would grieve for a time, of course, but he'd get over it. He'd never need to know what had happened.

So early the next morning Aunt Safie went out to look for the kitten. It was not in its pen. "Kitty, kitty," she called softly as she looked around for it. Yes, it had heard and was coming down the path toward her. In its mouth was a grey rat. The kitten came straight to her and laid the rat at her feet. "Meow, meow," it said.

Aunt Safie laughed. "Well, if you aren't the pluckiest little kitty I've seen for a long time," she said as she patted it. "That is an ugly rat for a little thing like you to tackle. I wouldn't be at all surprised if it weren't after the baby chicks." She paused as she remembered her purpose in looking for the kitten, and then she changed all of her plans. "Meow, meow," said kitty in a pleading tone.

"Of course, you may stay," Aunt Safie said. "We need a good rat-catcher on the place. Sometimes I fear that Tabby has grown too fat and lazy to be worth much."

All the while this was going on, Prakash slept peacefully in his cozy bed, little dreaming how near he had come to losing his newest pet —and, of course, Aunt Safie never meant to tell him.

PRESENT FLU EPIDEMIC NO MATCH FOR ONE IN 1919

Medicine Protects Victims from Worst Consequences

THE term "influenza epidemic," much in the news lately, conjures up for many people fantasies of the great flu pandemic of 1918 and 1919, which took 20,000,000 lives around the world. Actually, this reaction to the present world-wide flu wave is quite unjustifiable, doctors say.

The "Far Eastern flu" which was first reported from Hong Kong in April and seems to be spreading wherever human beings live is only a pale shadow of its devastating predecessor. Although hundreds of thousands throughout Asia have had the disease in the past three months, only a very small proportion of the cases have been fatal.

And although flu typically strikes mainly at young adults, the young have accounted for few of the deaths occurring in the present epidemic Most fatalities have been found among the normally much more vulnerable groups, the very young and the very old.

But the relative mildness of the flu epidemic of 1957, as compared to that of 1918, does not mean, of course, that either the present or any of the other numerous variations can be disregarded with impunity. All of them are specific, acute infections of the entire system. All bring high fever for at least three or four days, respiratory or gastro-intestinal inflammation and head, back and other pains And such symptoms always call for both attention and care.

The danger to the individual from flu, however, lies not so much in this relatively short-lived discomfort as in the exhaustion and weakness it leaves in its wake. For a protracted period—convalescence is usually slow—the patient is far more vulnerable than ordinarily to other, entirely new infections. And when they strike, their effect on the already debilitated victim is often devastating and far worse than the original flu.

This frequent sequel is known as "secondary infection" — "secondary" not because it is of minor importance but because it follows a first infection. Many diseases may be contracted under these circumstances, but the most serious and one of the most common is bacterial pneumonia, which can be a very grave matter at any time but especially in this role.

Against flu itself, once the infection is contracted, medical science has little specific treatment to offer. This is principally because the disease is caused by a virus, and all but a very few viruses are beyond reach of even the newest drugs. Medical defences against flu proper are thus necessarily limited to helping the patient husband his ebbing strength by unlimited bed rest and by taking adequate nourishment.

But against secondary infection medicine is now far better armed than it was in 1918-1919 when millions died while doctors stood helplessly by. Today—in 1957—there is available the full range of modern antibiotic drugs, such as Achromycin, Aureomycin and others which offer potent protection

(Continued on p. 28.)

HOMEMAKERS' HELPS

Mary Ninaj Larson

YOUR INDUSTRIOUS CHILD

A CHILD is full of energy. It is natural for him to keep moving, to keep going, to keep doing something. He scarcely knows how to keep still.

This ceaseless motion, this constant desire for unceasing activity is a blessing to the parents, for it gives them an unparallelled opportunity to teach their children industry at a very tender age. Nor is it difficult, for nothing delights the little son or daughter more than to help Mummy or Daddy.

It is imperative that the child learn how to work, how to be industrious, not only because useful industry will bring advantages to him in his adult life, but because useful and congenial labour brings happiness to him all through his childhood and growing years

A little child wants to do what Mother or Father is doing Let the little one help. He is imitative. Be patient. Guide the little fingers until they become more skilful.

It won't be very long before he can learn to take care of his playthings. It will take a little while to teach him where to put them away and how to put them away. If we are patient with the little child (and the older one!), he will learn just how to care for his things However, we must not be lax. He needs to understand that always his playthings must be put away, and that always they are to be put into the same place.

He can learn quite early to hang up his night clothes, to put his shoes away neatly. He will learn to run little errands, and to do little tasks about the home—within his ability. He will enjoy doing all these things if we praise him and express our appreciation to him for the nice way he has done this or that.

We need to remember that usually companionship of the parent in the accomplishment of a task is a prime requisite. He wants to work with us, particularly when he is very young. All during his early childhood he wants to be with us or near us.

Children love to work in the garden. They can be taught how to plant seeds, how to help Mother or Father weed, how to water the plants.

RECIPES

SPICED CABBAGE

Ingredients:

One small cabbage, 1 tablespoonful margarine, 4 oz. water; 2 cloves; salt to taste; 1 cup sliced apples, 2 tablespoonfuls sugar 2 tablespoonfuls lemon juice.

Method·

Shred the cabbage very fine. Melt the margarine in a degchi. Add the water and all the ingredients except the lemon juice. Cover the degchi and cook slowly for 30 minutes Add the lemon juice. Simmer for a few more minutes before serving.

HAWAIIAN SWEET POTATOES

Ingredients:

One cup mashed sweet potatoes, ¼ cup grated pineapple; 1 tablespoonful butter; salt to taste.

Method:

Combine pineapple with potatoes and place in greased baking dish. Dot with margarine. Brown in a moderate oven for about 20 or 25 minutes.

GLORIFIED CARROTS

Ingredients

Two cups cooked grated carrots, 2 cups fresh bread crumbs; salt to taste, eggs to mix.

Method:

Mix ingredients together, using enough eggs to moisten to the consistency for cutlets. Shape and fry in deep fat. Serve with green peas or onions in cream sauce.

CARROT TIMBALES

Ingredients.

Two cups grated carrots; ½ cup bread crumbs; 2 eggs, 2 tablespoonfuls melted butter; ½ cup milk; 1 teaspoonful salt.

Method

Wash, scrape, and grate carrots and mix with bread crumbs. Beat eggs and add seasoning, fat, and milk to them. Add this to the carrots and crumbs. Fill greased baking dish or custard cups. Set in pan of hot water and bake in moderate oven until firm.

Children can be taught how to feed and care for pets, how to help with the cooking, with the setting of the table, how to sew, how to keep the home neat, how to use tools.

But the parents need to remember that it takes time for little fingers to become skilful; Father and Mother need patience and pleasantness. Nagging and fretfulness will spoil our efforts. If we expect too much, and if we do not remember that it takes some time for skill to come, our efforts to help him to become a useful individual will be lost.

We need to teach ourselves to perform our tasks in the very best way so that neither motion nor time will be lost in the performance of work. Only then can we teach the little ones that perfection and skill which makes for smoothness, order, and the satisfactory accomplishment of a task.

Teach the child to finish whatever he begins. It is better to give a child a smaller task which he can successfully accomplish, than a greater task which will be left unfinished because it is too much for him. Not only does the task itself demand that it be finished, but the satisfaction of the spirit also calls for the completion of a set piece of work.

And do not forget the reward. The gardener is rewarded for his labours by the fruits of the garden. Much of what the child does, he will do as his part in the running of the home. But there are tasks that should earn a special reward besides Mother's happy smile and Father's "Well done." Produce from his garden, money to be carefully used—these have their place, too.

HUNGRY FOR KINDNESS

(Continued from p. 3.)

to come to Gladstone's office. Immediately he began to apologize, but Gladstone stopped him with these words:

"You have been dealing for years with the intricacies of national accounts and you have done your work with such exactness that this is your first mistake. It was because of your splendid record that I did not trouble to verify your calculations. I have sent for you to compliment you on your record and to set your mind at ease."

That was a big thing for a man to do—the overflow from a big heart. It was the kind of thing that made Gladstone the greatest political leader in British history.

"It is difficult to tell how much men's minds are conciliated by a kind manner and gentle speech." Then why not be kind—always? Perhaps today you shall have occasion to be kind to someone. Wherever there is a human being there is an opportunity to let this sweet, white virtue flow out into a hungry heart.

Plastic Surgery for INJURIES and BLEMISHES

(Continued from p 21)

tight clothing such as brassiere strap or a tight-fitting girdle. In men common areas of irritation are portions of the face where constant shaving exposes the mole to injury, and locations under the belt In both sexes common areas of irritation are such places as the sole of the foot, the palm of the hand, or the bed of a finger-nail or toe-nail In these areas it is wise to have pigmented moles removed as a preventive measure The safest method of treatment is simple excision

The hæmangioma birth-marks are commonly two types. The cavernous variety, which is generally raised over the surrounding surface, is soft and spongy to the touch This type often begins to regress spontaneously at one or two years, and frequently has disappeared entirely by five years. Watchful expectation is generally considered the treatment of choice in this type of lesion. Often before undergoing regression they may increase greatly in size. They should be under the regular periodic observation of the surgeon.

They in themselves tend to scar the overlying skin. Later on when the lesion disappears of its own accord, considerable scarring is left behind as a result of the expedient treatment. It is generally felt today that this type of birth-mark should be watched carefully by the attending plastic surgeon but not treated unless he considers it necessary.

The second type of hæmangioma varies in colour from pink to deep purple, and often covers portions of the face and neck in amounts ranging from small discolorations to massive blotches It is not particularly raised from the surrounding surface. This type of lesion does not disappear spontaneously. It is most often treated by one method or a combination of methods, such as X-ray, carbon dioxide snow, tattooing, or if not too large, by surgical excision. If the birth-marks are excessively large, a number of operations may be required, part of the lesion being removed with each procedure and at the same time the surrounding normal skin being gradually ad-

vanced to cover the defect, or it may be advisable to remove them at once. If so, they can be excised *in toto* and a skin graft placed over the area.

For those patients reluctant to have facial operations, or for those marks too large or in too difficult an area to attack (for example, around the eyes), certain commercial concealing creams are available to mask the underlying discoloration.

Plastic surgery, one of the oldest of healing arts, is no longer an experimental branch but an essential part of modern health services. More important, these services are available to everyone, not alone to the privileged few who can afford large fees There is scarcely a large hospital that does not have a plastic surgeon on its staff.

Plastic surgery is always a delicate procedure It is safe only in direct proportion to the skill of the surgeon performing it. Ill-advised attempts at face lifting or other plastic procedures by poorly trained surgeons have left untold numbers of men and women gruesomely scarred.

If you or any member of your family contemplates plastic surgery, consider this advice:

First, consult your family physician, who will refer you to a surgeon known to him. If you have no regular family doctor, you may obtain the same information by calling on your local medical society for the names of competent plastic surgeons in your area. The names of properly trained plastic surgeons can be furnished also by any medical school in your area.

Whatever you do, beware of high powered, poorly trained "beauty specialists" whose offices are plastered with before-and-after pictures of nose re-constructions and the face liftings they have done. Choose a well-qualified plastic surgeon and you can be sure of reaping the richest rewards of this venerable art.

PRESENT FLU EPIDEMIC NO MATCH FOR ONE IN 1919

(Continued from p. 25.)

against practically all common infections except those due to viruses. Medical men believe that if these drugs had been available forty years ago, many of the 20,000,000 victims of the earlier pandemic would still be alive today.

Thus a special precaution taken by doctors in many cases of the present type of flu is the administration of Achromycin tetracycline for instance, prophylactically. The patient takes it while still suffering from flu and its presence in the bloodstream prevents any fresh infection from getting started. Antibiotics are naturally also effective after new infection begins, but this is another instance where prevention is preferred to cure

This safeguard is reported to be considered especially important by doctors in many countries at the present time The reason is that the deceptive mildness of the existing type of flu apparently misleads many patients into underestimating its danger. As a consequence, they expose themselves unduly to risks of secondary infection.

Preventive vaccines have long existed against some kinds of influenza, but not all. In particular, when the present outbreak began, there was no such protection against the three strains of the virus which had been isolated from "Far East flu" sufferers.

Now, however, U. S. pharmaceutical manufacturers, working night and day for several months, have produced a vaccine which does combat these types. Manufacture has begun and is expected to reach major proportions by October or November.

This is a complicated, long drawn-out process, which consists essentially of adapting the desired strains of virus to living and growing embryonated chicken egg tissues and then planting and "harvesting" crops of virus. After the virus has developed in quantity, the embryonic fluid is refined and concentrated, and the virus is killed by adding formalin. This renders it safe for use in humans but does not impair its influenza-protective qualities.—*Communications International.*

YOU CAN LIVE LONGER

(Continued from p. 11.)

for the next ten minutes. No wonder many babies born to smoking mothers come into this world with weak hearts, and degeneration of the liver and other organs. One authority estimates that six out of every ten babies born to smoking mothers will die before they are two years of age.

Last, but by no means least, is the recently recognized effect of tobacco tars on the mouth, throat and lungs. When the black tar is extracted from tobacco and smeared repeatedly on the ear of a rabbit or the back of a mouse, it will almost always in time, produce cancer of the treated part. This explains why so many smokers develop cancer of the mouth, throat, or lungs. Records show that the increase of lung cancer in the

U. S. A. corresponds with the increase in tobacco consumption. When a smoker is found to have lung cancer and his lung is removed, instead of a healthy pink colour, the lung has a black, tarry appearance. Dr. Ochsner of the United States, who first demonstrated the effects of smoking on the lungs, states that "the more a person smokes, and the longer he smokes, the more probable it is cancer will develop." Cancer of the lung is increasing more than cancer in any other part of the body. In another 15 years, he warns, "lung cancer will probably cause 25 per cent of all deaths of American males between 45 and 55 years of age."

Medical authorities report that 95 per cent of the people who develop lung cancer smoke at least one packet of cigarettes daily. 20,000 people die of lung cancer in the United States alone every year. It is also showing an alarming increase in India. The Chittaranjan Cancer Hospital treated only eight cases of cancer of the lung in 1950, but by 1953 the number of cases in this hospital alone had increased to fifty. Surely the intelligent person who wants to live longer will give up the use of tobacco.

Another detrimental habit which is particularly prevalent in Southern Asia is the chewing of pan (betel leaf). Many ignorantly assume, or perhaps are even told by some uninformed medical adviser, that pan chewing is beneficial to digestion. But nothing could be further from the truth. On the contrary, pan chewing greatly retards digestion. It is true that the spices contained in most pan mixtures stimulate the flow of salivary juices. But, of course, they do so at the wrong time. When pan is chewed in between meals, as it invariably is, the digestive juices are stimulated to unnatural action and thus depleted of their quantity and strength, so that when a meal is taken, insufficient juices are available and digestion is correspondingly slower

But the effect of pan chewing on digestion is one of the least of its harmful effects. Mention could be made of the detrimental effects the lime has on the addicts' teeth. Undoubtedly much needless pain and many lost teeth can be attributed to the undermining effects of the lime on the teeth and gums

And one of the worst results of pan chewing is the effect of the irritating spices on the delicate membranes of the mouth and lips. Medical authorities of Kuala Lumpur (Malaya) "have advised Indians to try and stop betel chewing, as statistics show that Indians have the highest incidence of cancer in Malaya. They have been shown to be particularly prone to cancer of the cheek"—*The Statesman*, August 8, 1954.

Dr Subodh Mitra, chairman of the Indian Cancer Society, North-eastern Division, while discussing the relationship of pan chewing to mouth cancer, stated "In India, cancer of the mouth was more common than in any other part of the world." Apparently the reason is the excessive pan chewing indulged in by most Indians.

During the 20-year period (1928-1948), investigation was carried out at the Dental Institute, Colombo, during which time 529,-372 patients were examined. Of these 211,748 patients showed changes in the tongue, oral mucous membrane, gums and teeth due to the habit of betel chewing. Commenting on this investigation, Dr. W. Balendra, L R C.P (London), M R C.S, L D.S. (England), L N S (Ceylon), stated in the *Indian Dental Review*, September, 1949: "Among the preventable cancers, the most obvious are those that are found in the mouth, and most of which originate as the result of excessive pan chewing, coupled with tobacco eating—a habit universally prevalent amongst the vast majority of our adult population. The habitual and indiscriminate pan-chewer who stuffs his mouth, umpteen times a day, with a hotch-potch of spiced and highly injurious ingredients suffers from a heavy incrustation of irritating calculus which undermines the surrounding structures of the teeth and leads eventually to pyorrhœa." How this pernicious habit acts also as a positive precursor of oral cancer is ably discussed by the author.

With these incriminating facts before us, we cannot escape the conclusion that alcohol, tobacco, and pan are directly and indirectly responsible for lakhs of deaths in

India and other south Asian countries. The man who values his life and wants to live longer should choose to discontinue these body-destroying habits. Nobody will question that habit is hard to break, particularly when it involves the use of some stimulant or narcotic to which the system has become accustomed and for which it appears to cry out. But with determined will-power and faith in God, the habit can be broken, and once the the practice is stopped, the system will once again become normal; health will improve; a major cause of disease and death will have been removed.

If you want to live longer, don't drink alcohol, smoke tobacco, or chew pan.

GARDENING FOR HEALTH

ROCK GARDENS

D. G. Cooper

A ROCK garden does not necessarily signify acres of artistically planted shrubs and exotic flowering species, with a stream meandering through, but any corner of the garden, or a spare plot can be converted into a rock garden with comparative ease and at no great expense.

There are no fixed rules about laying out a rock garden. In fact, it should be borne in mind right from the start that plans should be laid out to conform with the location and not vice versa, thus eliminating the expense of levelling out or raising the level of the soil However, as far as possible avoid laying out the rock garden under the dense shade of trees

Having selected the location, it will now be necessary to obtain suitable rocks Collect rocks which can be conveniently handled, preferably those that have been moulded into curious shapes by the different elements of nature Arranging the rocks is a matter of taste, but on no account should it be overdone by piling up too many rocks on one spot. Try to visualize how the rocks will look arranged in a certain way, and draw up plans accordingly. The rocks should be firmly embedded in the earth, and care should be taken to see they are not dislodged easily.

Most rock plants prefer a soil which is fairly rich and porous If the existing soil be poor, it will be necessary to remove the same to a depth of about eighteen inches, and replace with a soil mixture consisting of one part sand, one part leaf mould and two parts loam.

The plants most suitable for a rockery are succulents, which can weather intense heat or strong winds. Should the rockery extend into the shade of trees, ferns, palms, and other suitable plants may be grown

A rockery designed on informal lines, having mild slopes and terraces, can have a background of Agaves, Aloe, Pitcairnia Alta, and Yucca Gloriosa The slope between the terraces may be interspersed by smaller succulents such as Euphorbia bojeri, Echeveria metallica, and Bryophyllum calycinum. A collection of flowering annuals suitably grown, adds colour and beauty to the rockery. For the summer season, try Salvias Splendens, Zinnia Linearis, Verbena erinoides, Zephyranthus lilies and Amaryllis For the cold weather, sow Allysum, Ageratum, Browalia Elata Candytuft, Calendula, Gerbera, Phlox Nana Compacta, Portulaca and Petunia.

A few creeping plants such as Hemigraphis colorata, Pellionia

GARDEN CALENDAR FOR NOVEMBER

Plains

Vegetables Make sowings of Beet, Carrots, Cress, French Beans, Onions and Melons. Stake Tomatoes and Peas.

Flowers Time for pruning Roses and putting down cuttings Canna bulbs to be divided and replanted.

Hills

During this month, no sowings can be made either of vegetables or flowers. Young plants, ferns and orchids should be protected from frost.

and Selaginella lævigata, planted along the edge of the rocks, covers up the bare spots, and has a most pleasing effect.

Given a little extra care, the rockery will always remain an added attraction to the garden Compost or leaf mould should be forked into the soil at the commencement of each season. Plants that have grown too large and unruly, should be up-rooted and replanted after dividing the root: Shrubs should be pruned whe necessary, and special attentio should be given to delicate plant requiring shelter from intense hea or cold.

?

DEBILITY: Ques.—"About five years ago I had an attack of typhoid. Shortly after recovery I had another attack and became very weak. Since then my hands shiver and I have difficulty in folding my legs. Kindly advise me what to do to get strong again."

Ans.—It is difficult to know what your prospects of recovery are without examining you carefully. There is a possibility that some permanent damage has been done as a result of the prolonged illness of which you speak. I would suggest that you carefully follow the rules of healthful living as many others have been decidedly benefited in so doing: 1. Get some exercise each day in the open air and sunshine. 2 Eat non-harmful foods including an abundance of fruit and vegetables, and at least a quart of milk each day. Do not use condiments, tea or coffee Do not use rich foods containing much sugar or grease 3 Develop proper habits of eating, such as, nothing between meals, two or three meals only each day, nothing within five hours of going to bed at night Make breakfast the largest meal of the day Chew your food thoroughly 4 Get at least 8-10 hours of sleep each night in the open air 5 Observe the principles of hygiene, taking only pure water to drink 6 Trust in God to strengthen you and give you back your health. Be cheerful at all times. "A merry heart doeth good like a medicine."

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DRIED FISH: Ques—"What are the harmful effects of eating dried fish?"

Ans—Dried fish if prepared in a hygienic way and if kept clean and free from disease is no more harmful than fish prepared in other ways However, flesh foods of any kind are not as good for one as are the natural foods such as fruits, vegetables, milk, nuts, grains, etc.

?

DIABETES: Ques—"I am 67 years old and a vegetarian I have had sugar in my urine but with a course of Insulin the amount of sugar is reduced. I now have severe pains in my waist and also feel weak. What diet should I take so as not to get into the Insulin habits?"

Ans.—You are suffering from diabetes Melitus, which is because your pancreas is failing to produce the amount of Insulin your body requires in the utilization of starches and



THE DOCTOR SAYS

1 This question and answer service is free only to regular subscribers

2 No attempt will be made to treat cases nor to take the place of a regular physician in caring for individual cases

3 All questions must be addressed to The Doctor Says Correspondence personally with the doctor is not available through this service

4 Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES Answers cannot be expected under ONE MONTH

5 Questions sent in on Post Cards will not receive attention

6 Make questions short and to the point Type them or write them very clearly

7 Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published Address "The Doctor Says," Oriental Watchman and Herald of Health, P O Box 35 Poona 1 India

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sugars The Diabetes may be controlled by one or two methods or a combination of the two. With some a strict diet is sufficient Sugars and sweets should be eliminated and the amount of starch taken should be considerably decreased

If the diabetes cannot be controlled by diet, then it is essential to take Insulin by injection and the Insulin should be taken regularly. This does not become a habit and Insulin is not a drug, but a physiological product of the body There are millions of people who take Insulin regularly and thus are able to live a normal life, whereas they would die an early death if Insulin was not available

I would therefore suggest that you try dieting, but if there is sugar in the urine and if the blood sugar is elevated, that you place yourself in the hands of a well-qualified physician and have him prescribe the required Insulin.

?

BACKACHE Ques--"I am forty-six years old and suffer from frequent backache, especially when walking long distances. What should I do about it?"

Ans—Backaches for a man of your age, after walking long distances is probably due to Arthritic changes in the spine This can be determined by an X-ray For this type of arthritis, so called Osteo-Arthritis, the best treatment is rest, with an application of heat to relieve the pain In any type of backache, however, I would advise that you consult a well-qualified physician, because backaches may be due to any number of causes, some of which are quite serious

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SPITTING HABIT Ques--"I don't smoke or chew but I have the habit of spitting constantly My mouth waters too much and it is such a nuisance that I have to constantly clear it Could you please tell me how it is caused and how I can stop this nuisance?"

Ans- The large amount of fluid is secreted by the glands of the mouth constantly Ordinarily this fluid is swallowed unconsciously. You must educate yourself to swallow rather than to spit the fluid out. Do not permit your mind to dwell upon the subject to such an extent that you have to be conscious of what you are doing

?

LEUCODERMA; TONSILITIS: Ques--"My son who is fourteen years old has white freckles all over his back and face. What is the remedy for it? He has large tonsils His left hand is slender due to a fall from a 3 ft high table when he was two years old"

Ans—Leucoderma can sometimes be controlled by injecting Ludermol into the de-pigmented areas, and by rubbing it on the areas Special preparations are used for each purpose. This product is prepared by Smith Stanistreet and Company, 18 Convent Road, Calcutta 14, and can be obtained from most well-stocked pharmacies

If his tonsils are infected, they should be removed I do not suppose anything aside from exercise would benefit the injury to his left hand.

?

NAIL BITING: Ques.—"I have had the habit of biting my finger nails from my childhood I am unable to avoid it Is it harmful to health? Please tell me some way to avoid this habit"

Ans—Nail biting is a nervous habit and can be controlled only by overcoming nervousness and by consciously refraining from biting the nails You might get some preparation of Aloes or of Quinine to paint on the nails and under the nails each day These are bitter substances and will call your attention to what you are doing when you start biting your nails.

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THE LAST WORD

GEORGE M. BAROYA

Small Atom Smasher Used to Treat Deep Cancer

ENCOURAGING results in the treatment of deep cancer with a small atom smasher have been reported by radiologists Malcolm A Bagshaw and Henry S. Kaplan of Stanford University at Stanford, California.

During the first year's use of the Stanford atom smasher, all traces of malignant tumour growth were eliminated in 48 patients, two-thirds of 74 who were treated In five other patients the tumours disappeared, but cancer already had spread to other parts of the body. In 21 cases the treatment failed to help.

The 48 patients in whom all traces of malignancy disappeared are not yet considered "cured," since experience has shown that new growth could re-appear. Doctors say they cannot be certain of a cancer cure until five or ten years have passed after the disappearance of a tumour.

A wide variety of tumours--throat, lung, prostate, kidney, bladder bone, brain and others—were treated in the first year of operation with the atom smasher Those treated apparently successfully included a child 22 months old with cancer of the eye, one of the most common forms of cancer in the very young

Of the 21 patients whom the machine failed to help, eight had been treated earlier with conventional X-rays. Experience in the use of the atom smasher to re-treat such patients was discouraging, Dr Bagshaw said

Three other patients in the "failure" group, also treated previously with conventional X-rays, were given only small, palliative doses of X-rays from the atom smasher. For various reasons no attempt could be made to cure them with a larger dose of high-energy X-radiation.

Three additional patients were classed as "failures" because they were not available for follow-up reports. This left seven cases out of the total of 74 for whom there was definite evidence that the atom-smasher treatment was not helpful.

The atom smashing machine used for treatment is a linear accelerator, which produces high energy electrons. It contains a 6-foot-long copper tube, through which it accelerates electrons almost to the speed of light. Emerging from the tube, the stream of electrons is converted to X-rays by passing it through discs of gold and brass. A lead shutter adjusts the stream to a mere pinpoint, or spreads it out over a larger area as required for therapy.

The X-rays are the same as those which come from a conventional X-ray machine, but are much more potent—6,000,000 volts compared to 200,000 or 300,000 volts This is the principal advantage of the atom smasher, for its more powerful X-rays deliver a deeper-level maximum dose of radiation —U S I. S.

Microphone Inside Heart Records Sounds

A TINY microphone that goes inside the heart to record the beating sounds and gives valuable new medical information has been developed at the Philadelphia General Hospital in the United States

The sounding technique, called intra-cardiac phonocardiology, uses a small catheter like that used for the blood pressure recordings taken during regular heart catheterization A microphone, measuring less than one-sixteenth of an inch in diameter, is placed in the tip of the catheter tube and guided into the various chambers of the heart. The sounds picked up there are then amplified and recorded on a tape recorder.—U. S. I. S.

Radioactive Drug Used to Measure Burns

RADIOACTIVE phosphorus, a peaceful product of atomic energy, can be used to determine quickly the depth of serious skin burns This was reported recently to the American Association of Plastic Surgeons by Dr. Reed O. Dingman of the University of Michigan Medical School

To know how to treat burns, the doctor explained, it is vitally important to know their depth. When the full skin thickness is destroyed by a third-degree burn, for example early removal of the skin and the grafting of new skin are required.

When radioactive phosphorus is injected, it is quickly absorbed by the body and can be measured around the burned area with radiation detection instruments. The amount of radiation around a third-degree burn differs sharply from that found in a first or second degree burn, Dr Dingman reported.—U. S. I. S

Training Spastics for Jobs in Industry

THERE is new hope for some of Britain's 30,000 spastics following on experience gained in the last few months at the institute opened in Hertfordshire by the National Spastics Society in January.

The object of the establishment—set up at Sherrards, a country house near Welwyn Garden City—is to prevent wastage of lives by providing basic training for spastic children to enable them to start careers in industry. It is now claimed that the mental and physical well-being of the trainees improves 300 per cent within two months —B I S

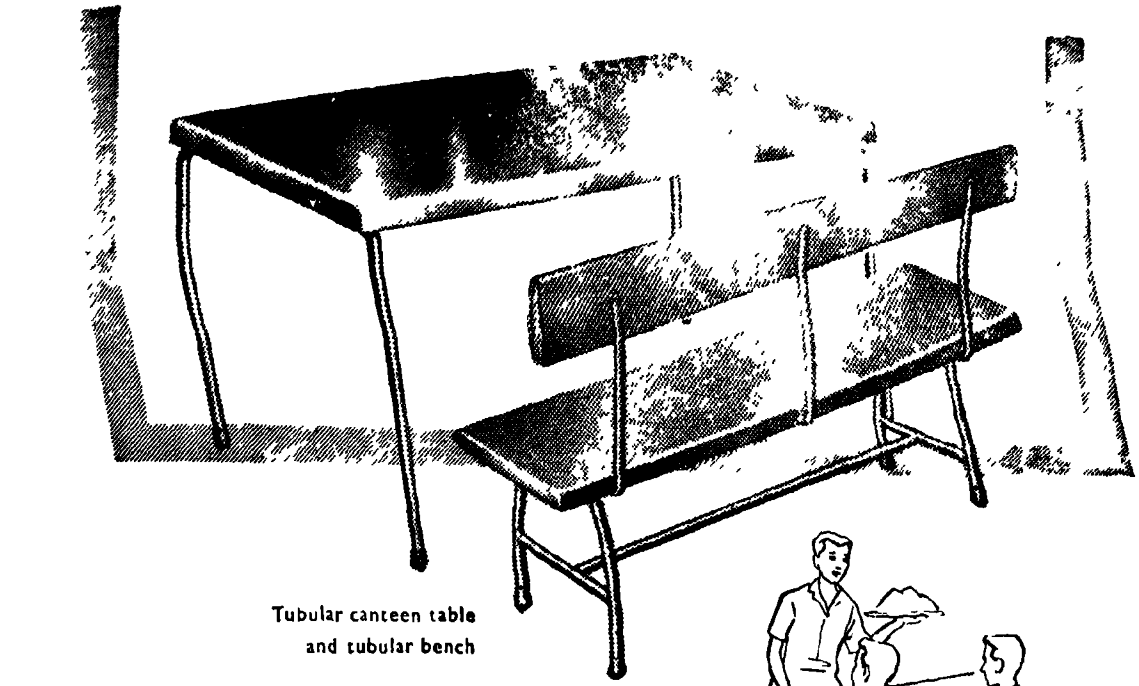
New Heart Apparatus

Science and medicine have collaborated in the production of a new heart machine which shocks uncontrolled heart rhythm back to normal without chest surgery.

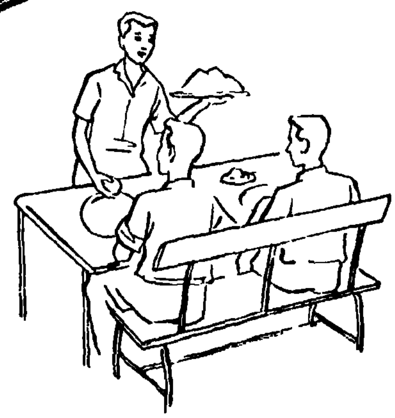
The new heart apparatus was described in Baltimore recently at the Johns Hopkins Hospital by Dr W B Kouwenhoven, professor emeritus of electrical engineering, and Dr. W. R Milner, assistant professor of medicine

Kouwenhoven developed the method with the help of Milner and several other Johns Hopkins doctors. He said his new device already has saved several lives He also said the machine is simple to operate and that it was produced to combat what medical men call "fibrillation," a fatal condition in which the heart muscles lost co-ordination and death follows within a few minutes.—U. S. I. S.

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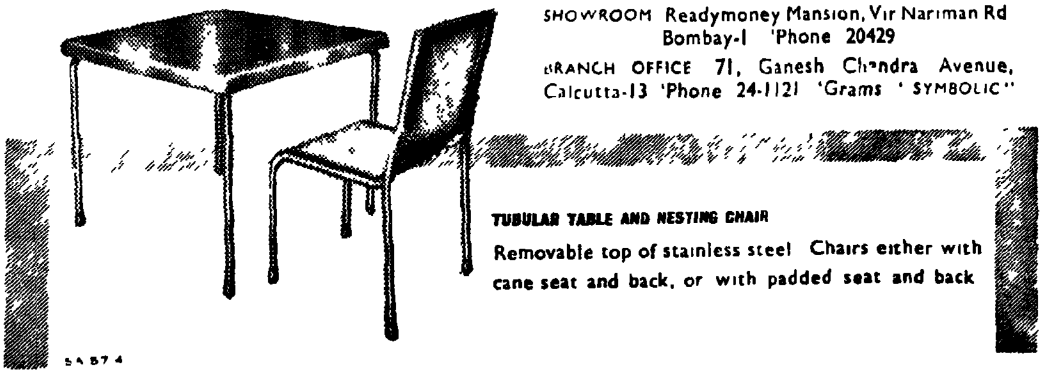
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SA 57 4

Nagpur Farm Shows

WAY TO SCIENTIFIC POULTRY BREEDING

(Continued from p 2)

ditions Naturally the approved methods of poultry husbandry there could be adopted to this area also "

Dr Moore devoted his energy first to improve the poultry feed He uses more grains, jawar, millet and wheat with a liberal addition of mineral mixture as also of antibiotics to prevent diseases This diet has already yielded tangible results improved the quality and quantity of birds, increased the rate of growth, boosted egg production, reduced the time for pullets to reach the egg-laying stage

Dr Moore is now experimenting with penicillin mycelia waste as a possible poultry feed. "Dehydrated penicillin waste is used in rations with good results in the United States, and there is no reason why it could not be used in this country also," he asserted The Pimpri penicillin factory, he pointed out, could supply the necessary quantity to meet the needs of the farm Presently, mycelia is thrown away as waste by the factory

A veterinarian in his own right, Dr Moore is keenly interested in controlling poultry diseases Fowl coryza is common disease which takes a heavy toll of birds in India He is now conducting experiments with the newly-arrived TCM chicks to control this disease by semi-isolation rearing

Dr Moore has successfully experimented with a new brooder device the feather brooder Ideally suited for villages, it has many advantages over the present method of brooding by the mother hen more hygienic and healthy as it eliminates the danger of chicks contacting disease from the mother, more economical as one brooder can take care of as many as 100 chicks whereas a mother hen can brood a maximum of 10 only, cheaper and saves labour

The TCM expert recently started a Poultry Club in Nagpur, on the lines of similar institutions in the United States, to stimulate interest *in poultry farming among breeders* Started with only a few members, it has now more than sixty on its rolls The Club holds meetings regularly when all aspects of poultry farming and breeding are discussed

Said Mr Bhide "The Club has become a useful forum for poultry breeders to meet and discuss problems of natural interest It is very helpful especially to villagers in educating on modern poultry developments It has stimulated considerable interest in poultry farming among the rural people

As a concrete example, Mr Bhide cited the co-operative poultry farm started recently by a band of enthusiastic villagers at Ramala, about twelve miles from Nagpur What was once a neglected, fallow plot of land, infested by weeds and bushes in the village is now a small, scientifically developed poultry farm. Dr Moore helped to design the poultry houses The Nagpur farm provided a flock of 175 birds

Besides encouraging such co-operative projects, the Central Farm helps individual villagers in a variety of ways it accepts deshi birds in exchange for improved breed from the farm, high quality hatching eggs are sold at concessional rates to villagers, and birds are supplied free to community development projects and national extension blocks in adjoining areas

"Our aim is not only to improve poultry farming here, but to disseminate modern poultry practices among ignorant villagers," Dr Bhide remarked And in this respect, the Central Poultry Farm in Nagpur can be proud of its creditable record of work

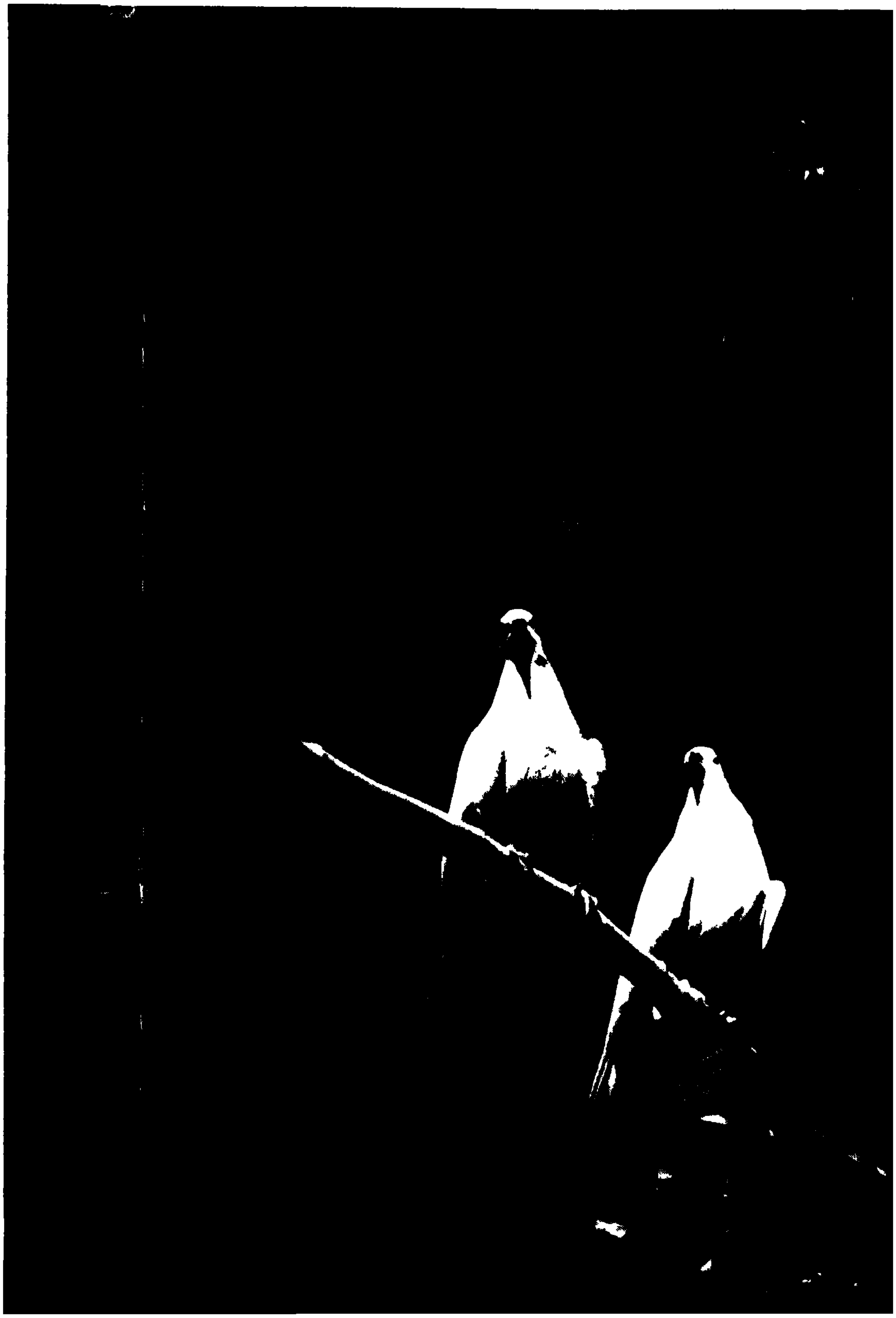


USIS

Dr Moore inspects chicks at the Ranala co-operative farm which was started with his help With him are (right) Mr Bhole Rao, extension officer, and Mr Govind Rao, president of the co-operative farm

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Herald of Health



A Prophecy Is Coming True

COURTESY P. I. B.

WHEN Louis Pasteur solved, about 100 years ago, one of the big mysteries of the causation of disease, he confidently declared "It is within the power of man to cause parasitic disease to vanish from the surface of the globe."

The World Health Organization is a symbol of this confidence and a pointer towards the fulfilment of his prophecy in a much wider sense than he could have imagined. WHO, besides aiming at the elimination of parasitic or other groups of diseases, works for the attainment, by all peoples, of the highest possible level of health. And health, WHO's Constitution defines, is not merely the absence of disease or infirmity but "a state of complete physical, mental, and social well-being."

WHO calls for a planned global attack and recognizes health not merely as something desirable but as a fundamental right of every man born.

The World Health Organization is one of the youngest of the Specialized Agencies of the United Nations. The Constitution of the Organization was adopted in 1946. By April 7, 1948, WHO's membership totalled 26 States, the number required to establish it as a permanent body. Today the Organization derives its authority from 88 Member States. Regional WHO programmes are endorsed every year at meetings of the Regional Committee attended by representatives of Member States in each of the six WHO Regions: South East Asia, Eastern Mediterranean, the Americas (Pan-American Sanitary Bureau), Western Pacific, Africa, Europe.

The types of assistance which WHO renders to governments may be for:

- strengthening national health services,
- establishing and maintaining epidemiological and statistical services,
- training of medical and health personnel,
- controlling epidemic and endemic diseases,
- maternal and child health,
- improvement of sanitation and of preventive and curative medical services.

PREVENTIVE ASPECT

Aiming at the greatest good of the largest number in the shortest possible time, WHO launched a

(Continued on p 36)



Photo: P I B

Shri Jawaharlal Nehru, The Indian Prime Minister, addressing the Fourteenth Session of WHO, held in New Delhi from January 10, 1957

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Herald of Health

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ASSOCIATE EDITOR

J B OLIVER, M D, D T M
ASSOCIATE EDITOR

Contents

FEATURE ARTICLES

OUR COVER

"On earth peace, good will to men."
—The Bible.

Photo Pranlal K Patel

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Minute Meditations

MAKING THE MOST OF OUR RELATIVES

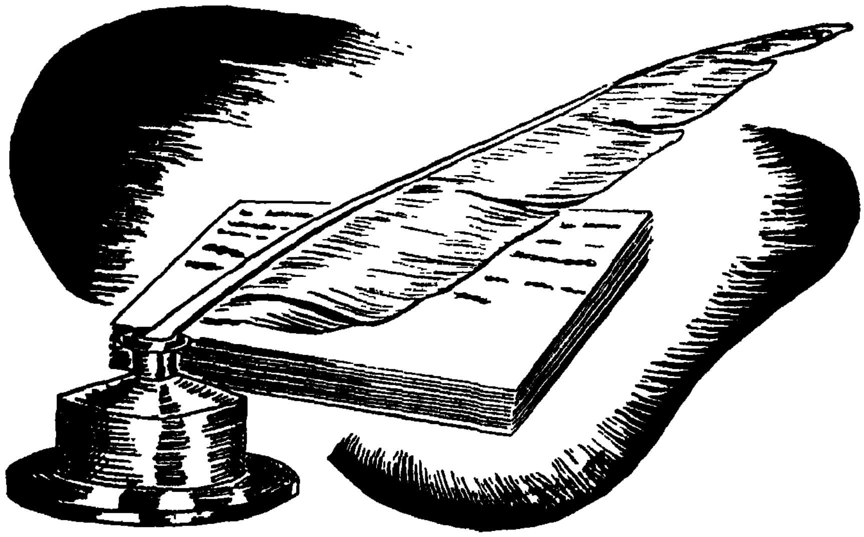
D. A. Delafield

IF YOUR relatives are like mine, you would have a devoted wife, two good children, an angel mother, two pretty sisters, an ailing stepfather, one missionary brother, a really nice mother-in-law, four husky brothers-in-law, a sister-in-law with a radiant smile, and a small galaxy of lovable nieces and nephews, uncles and aunts. Quite a firmament of dear ones to brighten your horizon, I hear you say. Yes, and I'm trying to make the most of all of them.

Notice please, I said that I am trying to make the most of them. I didn't say that I am trying to put up with them. Relatives should be appreciated and enjoyed, not merely tolerated. Make over them but don't try to make them over. Most people think that their relatives need to be reformed, especially their in-laws. Maybe they do, but you aren't the one to do it. They probably aren't looking for advice, so don't offer any unless you are asked. What you do in a year's time will ring the bell louder and echo longer in their ears than all the improvements you can suggest in a life-time. If you have something to share with the folks, make it so attractive that they will want some too, whether it's your religion. your business experience, your advice, one of your dog's puppies, or your wife's best recipe. No one likes to be around people who are so full of wisdom that it oozes from every pore.

Assume the role of the learner and let the relatives do the talking. Before you know it you will get to a field in which you know more than they do and they'll be

(Continued on p. 17.)



THE EDITOR SAYS

THE SOOTHING SLANT

J DEWITT FOX, M.D.

IF YOU are one of those millions of people who arrive home at the end of the day with aching, swollen feet, tight back muscles, backache, and feeling tense and irritable, then we prescribe a very pleasant and relaxing few minutes for you.

These few minutes are to be spent on a slant board, your body on a slant, with your head dow feet elevated about eighteen inch above your head. You can ac complish this by simply building board wider than your shoulde and elevating one end abou eighteen inches. Now, lying wit your feet up and head down, ju let go.

You will notice that your bod begins to relax very soon and yc are taking a great strain off tl muscles and blood vessels that we under pressure all day. This kir of relaxation is prescribed fo beauty by Hollywood experts, bu it has more than beautifying effect for it takes strain off your heart as well as your muscles. Its effect to allow more blood to flow towar your face, head, and heart and le to your legs, where it is prone pool and give you those swolle feet





Photo by N Ramakrishna

Relaxation is good for both mother and baby.

Of course you don't have build a special board. If you a in a hurry to elevate your feet, ju lie on your back on the floor ar throw your feet up on to a couch an easy chair. But the relaxation not quite so great as when yo body is well supported and yo have a straight inclined surface lie on.

For most of us who stand or upright all day, this is a wonderf chance for reversing the proce and putting at rest those tir muscles that work so hard all d to hold us erect.

Many an office secretary knows at aching shoulder muscles are; rbers, surgeons, and salespeople n tell us about swollen, aching et But almost anyone—farmer, ricklayer, or banker can enjoy a leasant half hour on a slant if he will but take the time.

Here is another advantage of the slant board. It takes time to relax, it takes time to keep healthy. And this is a pleasant litle device to get you to take time to relax You can't read, write, listen to the radio, wash dishes, or worry about the income tax while on the slant board. For its full benefits, you simply "let go" and forget everything except that fine vacation you are going to take next summer, the nice surprise birthday party you are planning for the kiddies, or some other pleasant thought By so doing you not only relax your body but also your brain.

What does all this do for your body and brain? First, it takes the strain off the big muscles of the body. It lets sagging abdominal muscles fall back into normal position. It elevates the diaphragm by gravity. The heart no longer must work under the strain of forcing blood through contracting muscles, for the muscles are relaxed and the blood vessels dilated and open. It lowers the blood pressure (a good treatment for folks with high blood pressure), it drains the blood and lymph that have collected in the feet and legs, and is excellent treatment for varicose vein and heart patients who have a tendency to swelling of the lower extremities.

There you have the reasons, and the benefits will be remarkable too. You will get up from the slant board feeling relaxed, happy, easygoing. You will leave behind on the board some of the bitterness and bite of life. Also some of the backache, foot pain, and tiredness. A few minutes spent this way each day can actually lengthen your life by taking the strain of everyday living off your brain and your body Best of all, it is a device for getting you to take time to relax, time that otherwise you would not take



Photo by L J Larson

A quiet hour with the family will bring restful sleep to all.

Now, if you want to prevent that nervous break-down, and if you feel as if you are cracking up, take the time to be healthy! Tonight when you get home from work, lie on a slant board, or lie with your feet up in a chair while the relaxation loosens your body and eases your muscles.

It is a grand prescription, I can assure you, one that I can guarantee will make you feel better, live longer.

Give it a trial!

NUTRITION PROJECT

(Continued from p. 27.)

the teeth, the simple and commonsense care of them and the danger of tartar formation. He said that rinsing the mouth directly after a meal cut dental caries by about fifty per cent. He also recommended the use of a medium-hard tooth brush, a mild dentifrice or salt, and a frequent visit to the dentist for checking. This programme, plus a diet liberal in vegetables and fruit, would ensure good teeth for a long time to come.

This, then, is a rather brief summary of some of the lectures given at Salisbury Park in Poona. Each lecture on nutrition was followed by a cooking demonstration and food display.

It is possible for any group to organize such a programme. Why not try it?

THE STUDENTS' GUIDE

CO-EXISTENCE—WITH *EXAMINATIONS*

GEORGE M BAROYA

EXAMINATIONS are usually looked upon by the student as necessary ills that cannot be cured and, therefore, must be endured.

If co-existence is to be the basis for the student's enduring these examinations, then he ought to endeavour to make his existence less painful, if not more pleasant

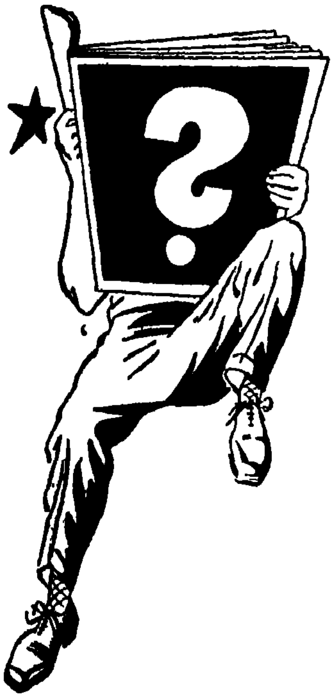
Roughly speaking, there are three aspects of preparation which the student will do well to keep in mind. He must be prepared scholastically. He must be able to follow instructions given on the question papers and furnish the answers called for. He should also be able to present his answers in a neat and attractive manner.

There must be genuine preparation to face these examinations This "preparation" consists of faithful application to study during the days of the academic year as well as the final and concentrated efforts during the days of "review"

"Reviewing" has been defined as "offering knowing nods to material studied and mastered, and cultivating friendship with portions not so well covered." The student might develop a false sense of security almost bordering on self-complacency, if he goes through his "review" in a mechanical manner. He must, of necessity, learn his lessons with a view to remember and to reproduce, should there arise occasion to do so.

We offer, without qualification, a statement that will stand the test of time: "A college student is capable of following instructions."

Now that the student is ready (he has studied well and is able to reproduce what he has studied) there remains another aspect of preparation that is often overlooked. It might be the cause for much discomfort to the student later on.



The student must acquaint himself with the wording of the questions. He must know what the instructions mean and what is expected of him. For instance, a student will do well (if he is to appear for an examination in English) to be familiar with the meanings of such expressions as "Explain with reference to context . . ," "Give a critical appreciation of . . . ," "Write a summary of . . . ," "Mention and describe . . . ," "What do you understand by . . . ?" "What do you know about . . . ?" "Expand the idea given in . . . "Narrate the story . . . ," "Tra the career of . . . ," "Make a prc of the following . . . ," "Give i brief the substance of . . . ," "Di cuss with reference to . . . "Narrate the significant events i the life of . . .," "Bringing out th main points, discuss the characte of . . . ," "Defend the idea con tained in the statement . . . ," etc etc., etc.

It is surprising to know the ex tent of ignorance that exists amon students regarding these instruc tions and their meanings. O course, such expressions will var according to subjects taken by th student. However, knowledge o these expressions will aid th student to live peacefully with hi examinations.

We repeat that the student mus familiarize himself with the type of and kinds of questions that ar asked in the different subjects take by him. We will even venture t say that knowing *how* to presen the answer to the different kinds o questions is of more value than th mere *ability to answer*. Much goo food has been wasted because o improper preparation and poor pre sentation.

Then, one should follow instruc tions implicitly and fully. It ha been noticed that sometimes a student has only partially answere a question, when he was well abl to answer it fully, simply becaus he did not follow the instructions



miners can judge a student only what they find written on his ers. Failing to follow instructions ht mean failing an examination. lowever, there yet remains ther aspect of preparation ch is of more importance than ny a student thinks. It must be rne in mind that the student's nmanship should be befitting to e level of study he is pursuing Children in the lower standards of igh school may be expected to write in an illegible hand but scribbling by college students cannot be countenanced. Every student must endeavour to prove to the examiners that he possesses good taste and courtesy. This can be done only by not expecting the examiners to read test papers that are slovenly in appearance and are only partly legible. The student should write in a legible hand and it need not be unnecessarily flowery.

With only a few months to prepare, the student, of whatever level he might be, will do well to prepare to live a life of peaceful co-existence with examinations and examiners! The student can make his existence either painful or more pleasant.

The choice, of course, is his.

WHAT EXERCISE CAN DO FOR YOU

(Continued from p. 15)

depends on the "feel" to land properly. Balancing of all types, as well as many of our most preferred sports, serves to train this sense.

23. Wise use of leisure time can result in training in exercise or sports, including camping and various other physical recreational activities.

24. Important spatial judgment, valuable at times to prevent accidents—as in judging moving cars —can result from playing with moving balls and persons.

25. Attitudes of fear and foreboding can be reduced by developing physical fitness. Such fitness results in improved confidence, self-reliance, and safety readiness. This may result in life-saving, such as in an effective resuscitation, in capable handling of a dangerous situation, in a rescue from drowning.

Training in sports and exercise opens the way to keeping oneself more fit throughout life than he would otherwise be. It also opens up many ways to help others, especially children. Application of this fact has been made to rehabilitation of the injured, the mentally depressed, and the overly busy professional man, who may have physically deteriorated to an unsafe level.

Improvements in circulatory-respiratory conditions can be made most easily with swimming, running (or alternating walking with running), skiing, hill climbing, rowing, or using a portable self-propelled treadmill. Weight lifting (or weight training), volleyball, shuffleboard, and bowling produce very little improvement. The activity in these sports is not continuous enough. The best activities are of locomotive type. The use of the legs in continuous rhythmic motion for more than thirty minutes is very important. Tennis, cycling, badminton, squash, and handball are quite good, especially if supplemented by some running. If you only sit as a spectator you will develop sag, and your heart and blood vessel condition will get worse.

Don't jump into a programme of heavy exercise. Rather, starting with a mild exercise, enter a plan of progressively more vigorous exercise. The exercise pattern for most people who are somewhat inactive, with a background of sedentary living for several years, should begin with ordinary walking, say a mile a day. Later this can be increased to two or three miles.

Stretching exercises done at home can be added. Little by little add more vigorous exercises.

It is very important to warm up for about twenty minutes with easy exercises and a good deal of deep breathing and running in place before doing very hard exercises. Running 440 yards as fast as possible is a very hard exercise, as is a five-minute step test done at thirty steps a minute. Running in place for two minutes with high knees, then sitting down and holding the breath thirty seconds, is a hard exercise. Running hard for a mile is a tough item.

Any exercise done to the limit will cause soreness unless you are very fit. However, such test exercises are very valuable in getting into top condition. A few of these are (1) push-ups, (2) leg lifts, (3) sitting tucks, (4) side leg raisings, (5) flutter kicks while lying on the stomach, (6) flutter kicks while lying on the back, (7) squat jumps, touching hands to floor, (8) squat, thrust legs backward, jump back to tuck, stand, (9) continuous hops, using several styles, (10) running in place for five minutes continuously, alternating slow jog with sprint style.

Exercise on apparatus is valuable, such as on rowing machines, pulley weights, the self-propelled treadmill. Medicine ball and barbell work is very good in developing strength.

Here are some precautions—note them carefully: Get a medical examination from your doctor, and let him advise you. Follow the advice of your physical director. Begin easily, and sleep enough.

What is better health and happiness insurance than a high level of fitness?

Dental Fillings

Silver or Gold?

LLOYD BAUM, D.M.D.

Let your personal dentist answer your questions as to the best dental fillings.

"GEORGE, I'll need the car this afternoon. I have an appointment with the dentist at two-thirty"

"Do you have a toothache?"

"No, he is planning to fill a couple of cavities for me."

"Well, don't come back with a mouthful of gold—we've got to eat too, you know!"

After a trip to the dentist a patient may be bewildered and ask, "Shall I have my teeth filled with gold or silver inlays?"

Many factors are involved in answering this question. The amount of wear on the teeth, the size of the cavity, and accessibility of the cavity must be considered.

Silver fillings in the true sense of the word do not exist. In dentistry the term *silver* refers in reality to amalgam. Amalgam filling material is mixed by the dentist just before he packs it into the tooth cavity. What is mixed together to produce amalgam is a combination of two materials—a glob of liquid mercury, or quicksilver, and some silver alloy particles These combine to form a plastic mass that when set produces a hard metallic filling.

We are all familiar with the crunch, crunch sound the amalgam makes as it is forced into the cavity under pressure of the plugger. If the amalgam filling is placed shortly before a meal, your dentist may tell you to chew on the other side or eat only soup to give the filling a chance to set.

Whenever a portion of tooth is destroyed by decay or by other causes, it must be restored to its original size and shape, or the function of the tooth is impaired. Tooth structure is different from any other body tissue. If you brea a bone, it will mend; burn you skin, it will heal; cut or bruise th body, nature initiates healing. A tooth injured by decay cannot b restored by nature.

The space created by deca must be replaced with some othe material. This material must b able to withstand tremendous wea and tear of chewing and grindin Metallic fillings have proved th most satisfactory to date.

Dental amalgam as a fillin material was first introduced abou 130 years ago. The use of denta amalgam was a controversial issu for nearly seventy-five years. Som dentists advocated its use, othe considered it an abomination. A one time members wishing to joi a dental society were black-balle if they used amalgam to fill teet In spite of the controversy and un warranted criticism, amalgam now being used more widely tha all other filling materials combine

The first amalgam fillings we crudely prepared. Clamping silver coin in a vice, the technicia used a machinist's file to mal silver filings, which in turn we mixed with mercury. Durir World War II some America dentists inside a Japanese prisc camp filled teeth of fellow pri oners with amalgam prepared fro Philippine silver coins. Many these fillings are giving satisfacto service today.

Dental amalgam has two u favourable characteristics. Ama gam turns black, or tarnishes, the mouth. But the discoloratic does not harm the effectiveness the filling. Some mouths cau amalgam to discolour more rapid than others. The cause is usual attributed to differences in mou acidity. Occasionally a gold inla will discolour in the mouth, b this action is not common as cor pared with amalgam.

The second disadvantage is th

(Continued on p. 20.)

Is It

Stomach Ulcer or Cancer?

ROBERT N. BROWN, M.D.

An ulcer may be helped by medicine, but some ulcers and all cancers demand quick and skilful surgery.

SO YOU have an ulcer. Take courage, my friend, for you are not alone. Fortunately, our chances for a cure, if you will follow your doctor's instructions, are about 85 to 90 per cent, owing to the health programme he has put you on. No doubt he has given you a detailed diet to follow carefully, certain specific medications, and instruction to "take it easy and quit worrying." The very fact that he added the last statement is evidence that he, as do most doctors, believes that ulcers occur far more often in persons who are nervous and highly strung than in persons who are placid

Peptic ulcers are of two kinds Most of them occur not in the stomach, as is commonly thought, but in the first portion of the small bowel just beyond the outlet of the stomach. Only about one in eight ulcers actually occurs in the stomach. Most of them occur in the first two inches of the small bowel. These are called duodenal ulcers. Fortunately duodenal ulcers are rarely malignant But this is not true of stomach ulcers.

Although about eighty-five per cent of non-malignant ulcers will heal on good medical treatment, about fifteen per cent will develop complications that require surgery. Perhaps the most common complication is failure of the ulcer to heal, even though good medical treatment is carried out Ulcers that keep recurring will eventually cause considerable scar tissue and stricture about the outlet of the stomach, causing a partial or a complete obstruction that requires repair surgery. Some ulcers will bleed, and occasionally ulcers rupture through the stomach or duodenal wall and produce acute pain. This condition requires immediate surgical treatment.

In these modern times, with good hospital facilities and well-trained surgeons available, operations on the stomach and bowel for ulcer carry a very low mortality rate.

Perhaps your doctor has advised you to have your ulcers removed, but you are perplexed, because Uncle Anand had the nerves to his stomach cut and his ulcers healed, and you have wondered which operation is better Today both types of operation are performed successfully. Each operation has its proper place, and your doctor is better qualified than anyone else to advise you which to have If he is not a surgeon he will seek the consultation and advice of a surgeon.

How many ulcers could be prevented today if we would live right, eat right, and give up some of our poor health habits! We certainly drink too much coffee and tea Almost every ulcer patient will bear witness that they aggravate his ulcer More than one doctor has refused to treat patients with ulcers if they persist in drinking coffee or in smoking Our Creator never intended such things as coffee, tea and tobacco to enter the human body in any manner, shape, or form

Then there is cancer of the stomach to be considered. It accounts for more than twelve per cent of all deaths due to cancer. In 1900 in America there were 64 deaths per 100,000 population caused by cancer of the stomach. The figure had doubled to 140 per 100,000 population by 1950. In 1950 the number of Americans who died from cancer was 210,733, and 24,258 of these died from cancer of the stomach. For reasons not entirely understood, cancer of the stomach is more common among

(Continued on p. 20.)

KEEP YOUR HEALTH

OWEN S. PARRETT, M.D.

A VACATION should be something quite different from your daily routine. We town and city dwellers like to get into the country. Real estate men in California are cutting up the desert with its cactus and wild flowers into parcels of land and selling them to city folk. The city dwellers build homes for week-ends and thoroughly enjoy their hide-aways.

I suggest that before you begin hiking mountain trails you have your heart checked. I shall tell you, rather, to have your habits checked. Did not a famous comedian die suddenly almost the day after a heart check? Did not President Eisenhower have his serious heart attack just six weeks after a careful heart check-up?

Exercise does nothing to hurt a good heart, but may show up a bad one. Regular, consistent exercise is essential to keep your heart physically fit. You will see wrestlers who are no longer young going at it for all they are worth—and wrestling is about the most strenuous of all activities If these men were to quit exercising, after a time they might develop bad hearts.

Exercise is good for your heart if you don't overdo What do I mean by "overdo?" If you drink coffee, smoke tobacco, and have a diet high in protein, especially if derived largely from meat and eggs, and you let yourself get overweight and soft from lack of exercise, you had better disregard all the tests that show your heart to be "perfect," and take it easy. Be careful at least until you can begin a different programme and build up your health again by good habits.

Your improved programme should include an improved diet that will provide some mixed cereals with their natural vitamins E and B. These vitamins are found largely in the germ of cereals. Wheat germ is an example.

Take exercise regularly at least every few days, or a little every day, if possible. Put yourself on a general health schedule. It's fun to have a heart that can take it, so that you don't have to be reminding yourself that you must go easy. Almost anyone can have that kind of heart with a bit of planning unless he was born with a bad heart or has had some such disease as inflammatory rheumatism.

Recently I attended a lecture given by a doctor friend who is a well-known surgeon. After telling of several close relatives who had died suddenly from heart failure this doctor said with some emphasis that he was very sure he would not pass out that way.

He said, "I do not expect this to happen to me, for I am avoiding the things that can cause heart failure."

This doctor is so health-conscious that he will not eat any white bread or refined cereals He lives largely on fruits, vegetables, nuts, and grains prepared without refining or processing. Such a health programme is worth far more to him than a life-insurance policy. Life assurance beats life insurance. You can collect and spend it yourself.

While I was sitting in a barber's chair recently the barber asked me whether I had ever heard of Hurricane Jackson I had heard of Hurricane Hazel and a few others, but no Hurricane Jackson. Well, this particular hurricane turned out to be a prize fighter.

The barber remarked that this man was famous for his staying powers when in the ring. "By the way," he said, "the announcer said

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ESTABLISH GOOD FOOD HABITS EARLY IN LIFE

	Every day your child should have some food from each of these Basic 7 Food Groups	*Approximate total daily amount for 1- to 4-year-olds*	*Approximate total daily amounts for 4- to 6-year-olds*	*Helpful Hints for Child Feeding*
Group 1	Leafy, green and yellow vegetables (raw, cooked, frozen, tinned).	¼ to 1/3 cup grated or finely chopped	[illegible] to ½ cup	Some of these vegetables should be eaten raw, some cooked. Young children prefer small portions and foods they can handle easily. They like colourful foods, such as carrots and peas; dislike stringy, lumpy, and slippery foods.
Group 2	Citrus fruits, tomatoes, raw cabbage and other high vitamin C foods.	1/3 to ¾ cup citrus juice	½ to 1 cup 1/3 to 2/3 cup	Give fruit juice between meals, if children prefer it then, to mealtime. Raw cabbage, a good source of vitamin C, should be ground for the 2- and 3-year-olds. Serve fruits frequently in fruited gelatine.
Group 3	Potatoes and other vegetables and fruits (raw, cooked, frozen, tinned, dried)	¼ to ½ cup	Serve occasionally	Serve potatoes often. Avoid radishes, cucumbers, raw onions, raw green pepper, corn and lima beans. Use cooked onions and green pepper in small amounts only. Peel fruits with tough skins. Do not give a small child seedy fruits.
Group 4	Milk (whole, skimmed, evaporated, condensed, dried, buttermilk). Cheese and cottage cheese serve occasionally.	*3 to 4 cups*	*4 cups*	Don't allow children to fill up on too much milk and neglect other essential foods. Two- and three-year-olds like food and drink that is lukewarm. Four-year-olds usually prefer cold milk. Use mild cheese in sauces and souffles.
Group 5	Eggs Dried beans and peas, finely ground nuts and peanut butter.	3 or more a week	4 or more a week	Fried foods, spicy foods, hot sauces and nuts, except ground, are not for the young. Dried peas and beans should be withheld until the fourth year.
Group 6	Bread, flour, cereals (whole grain or enriched)	1/3 cup cereal and 1 or 2 slices of bread	½ cup cereal and 1 or 2 slices of bread.	Use cooked cereals frequently. For variety, use ready-to-eat cereals, except bran. Spaghetti, macaroni, noodles, semolina and rice are classified as cereals. Hot breads and pancakes may be served on special occasions.
Group 7	Butter and margarine	1 to 2 tablespoonfuls.	2 tablespoonfuls	Use butter or margarine spread thinly on bread. Children are likely to want more fat than is good for them. They need fish-liver oil, as prescribed by a doctor, through the fifth year.

Arthritis

NINA M. MUNSON, R.N.

Modern medical research is directed upon arthritis with the hope of vanquishing it.

WHEN Mrs. Smith tried to change her position in bed, great stabs of pain pierced every joint. "O-o-oh!" she wailed, gingerly folding swollen hands across her chest. "Is anything more painful than arthritis! Maybe there are worse things to have," she said, "but it would be hard to convince me there's anything more torturing!"

It would be just as hard to convince the other millions of persons who are suffering the agonies of arthritic pains and trying desperately to adapt their lives to the unwelcome role of invalidism or semi-invalidism.

There is a ray of hope discernible, however. In the past few years something has been done about arthritis. With a new interest directed upon arthritis by individual physicians—those who have come to know that its treatment consists of more than a waiting for the weather to change—and the work of the National Arthritis and Rheumatism Foundation (U. S. A.), it can be hoped that soon the cause or causes will be uncovered and the door opened to specific treatment.

Arthritis may start suddenly, viciously, perhaps shortly after influenza or some other illness. Or it may come on insidiously, for no known reason—a pain here, a stiff joint there Sometimes it does not go beyond this annoying stage, and spontaneously clears up. Again, it continues on and becomes worse, until the victim is helpless in its grip.

Early treatment under a specialist cannot be too strongly urged, for it is the arthritic's greatest security against permanent deformity and invalidism after the acute stage has passed.

Experimenting with "sure cures" over-confidently urged by self-styled medical advisers who consider themselves better qualified to treat you than any doctor, is like travelling on a merry-go-round. You pay the fare, go round and round, but get nowhere.

Considering the different types of arthritis and the people who have twinges of pain (which may or may not be arthritis), it is worse than a waste of time, money, and effort to place faith in bizzarre panaceas—many of them not too far removed from heathenism—that took So-and-so right out of the wheel chair. The agonizing nature of this illness puts the arthritic in a receptive frame of mind for anything that suggests relief, but chasing will-o'-the-wisps only gives the disease a head start.

A specialist on arthritis compressed his many years of experience and observation in one terse sentence Said he, "The treatment for arthritis is not some one item or method, but a programme—a programme carried on over a period of time." And a physician half a continent away echoed his opinion: "There just isn't any quick cure for arthritis."

Arthritis is a hill-and-valley experience. No arthritic needs to be told that! It has remissions, when hopes soar; and it bristles with flare-ups, when it seems that the battle is lost. But with proper treatment, preferably under a specialist who uses physical therapy, and the patient's utmost in co-operation, patience, and persistence, the valley experiences become less frequent The general trend—as a graphic chart would show—is up. Nothing quick, sudden, or spectacular— but up.

The powerful hormones ACTH and cortisone have performed near miracles for the arthritic. Regrettably, they do not cure. They do relieve the pain, and this permits the arthritic to move about more freely, thus helping to prevent much stiffness and deformity. Because of the nature of these preparations they must be given only under the close supervision of a physician.

As to diet, because frequently there are indications of poor nutrition over a period of years, a "building" diet is advised. It is high in protein, vitamins, and minerals and low in carbohydrates and refined foods.

Physical therapy is coming into its own in the treatment of arthritis. Aside from relief of pain, its value is becoming more and more appreciated by doctors throughout the world. Even Mahatma Gandhi, though not a physician, understood the principles of hydrotherapy, which is one branch of physical therapy, and delighted personally, so one biographer states, to give fomentations and massage to the

sick who came under his attention. Who would hazard a guess as to how many arthritics he relieved?

Much of the physical therapy used in arthritis is complicated, and must be given in a hospital by trained technicians. But the arthritic who cannot remain in the hospital for an indefinite period need not feel that the outlook for him is hopeless. Some of the most effective of physical therapy procedures are available for home use. These are heat, massage, exercise, rest

Though these home treatments are simple, their simplicity lies in their adaptability to application. They must be given properly or they may do more harm than good. How can you know whether they are properly given? Talk the matter over with your doctor, and he will help you to arrange for a physiotherapist to give the treatments in your home or to instruct some member of the family. In this way, the patient can have a high type of care right at home

Since space permits tips on only one phase of home treatment, let's take heat. It usually gives immediate and almost complete temporary relief from the painful gnawing misery, and can be used several times a day. It relaxes the muscles, dilates the blood vessels, and increases the flow of blood and lymph to the part. This action hastens the removal of waste products and the absorption of exudate caused by the inflammatory process.

Anything that will hold and convey heat to a painful area of the body can be used—electric pad, hot-water bottle, hot tub bath, bags of heated sand, chemical heating pads, electrical household heaters, fomentations, infra-red lamps Dry heat gives some patients the greatest relief; moist heat gives others the greatest relief Dry heat is changed to moist heat by wringing a towel out of hot water, placing it over the part to be treated, and directing the dry heat on it Cover the wet towel and do not allow it to cool around the edges Clammy edges could counteract all the good effects of the treatment

Occasionally heat increases the pain. When this occurs, discontinue the treatment and report its effect to the physician *so that he may make* proper adjustment.

A suggestion as to technique in giving fomentations: Remove each one before it reaches the cool, clammy stage, and have the next one ready to apply. Dry the body between applications. At the close of the treatment, rub the part with a cool wet cloth or rubbing alcohol, dry it, dust with talcum, and cover with a blanket. Epsom salts—half a cup to a bucket of water—added to the hot water from which the flannel cloths are wrung will increase the effectiveness in relieving pain and swelling

Never leave the patient alone in a tub bath. He already is weak, heat may increase his weakness, and an accident can easily occur. A cold cloth to the head while he is in the tub will be very welcome, and will prevent congestion and headache. At the close of the tub bath—which is given at 98 to 102° F twenty to thirty minutes—cool the water to tepid and give a gentle alcohol rub-down Guard against chilling Best results from any treatment are obtained if the patient rests quietly or sleeps afterward

Getting into or out of the tub may be difficult. A set of steps that fit into the tub will assist the patient in lowering himself into the water and in *getting out of the tub. A* rubber mat on the *bottom of the* tub will give added security.

Just a word about pillows. Though comforting to the patient, they should not be used except as bracers at the sides of the body. True, they may support painful arms and legs in less painful positions, but while doing so they encourage contraction of muscles, stiffness, and future deformities.

No treatment should be carried to the point of pain or fatigue. This is true of exercise and massage in particular. Forced beyond this point, a joint or muscle that has been giving little or no trouble may flare into an acute fiery inflammation.

So broad a topic as arthritis could not possibly be covered in so short a space, but it is hoped that in this article two important factors have come into focus: 1. Early treatment under a specialist. 2. Willingness, patience, and determination—in spite of remissions and flare-ups, quacks and fanatics—to carry out a daily programme of treatment over a very long period if necessary.

Remember, "there just isn't any quick cure for arthritis"—yet! Rather, it is "a programme carried on over a period of time."

Arthritics, there is a ray of hope discernible



WHAT EXERCISE CAN DO FOR YOU

THE principal basis for evaluating the contribution of exercise or sport training to health and fitness is "more life for your years," rather than longevity. We all want to live as many years as possible, but along with our extended time we would prefer living with zest, high energy, and satisfaction.

Will regular exercise taken in such a way as to improve physical fitness increase longevity, lower the blood cholesterol levels, strengthen the heart, and prevent a sudden collapse? There is no final answer to this question yet, but there are indications that exercise can bring about such changes in some persons and may possibly postpone a collapse, as Dr. Paul Dudley White has indicated in discussing the relationship of golf to President Eisenhower's health.

There are many reasons why regular exercises make for fitness and health, some of which you may not even know about.

Here is what regular training exercise can do for you:

1. Regular exercise taken properly can increase the use you make of your food. The extent to which food can be used by the body (metabolized) is probably the best fitness test of all. If a person uses his food he will not grow fat. The basal metabolic rate and habitual body temperature will slowly rise during several weeks or months of physical training if the programme is not too hard. The healthy, fit person usually has abundant body heat, a warm radiant glow. When exercise opens as many capillaries as possible in the muscles, lungs, and heart the circulation is best and the use of food is most highly facilitated.

2. Regular progressive training exercise can affect the balance of the autonomic, or involuntary, nervous system. The shift is usually from a disinclination for activity to an inclination for it. The wish to avoid work can change to a wish to do physical work. The tone of the vagus nerve—one of the nerves that control sensation and motion—is strengthened. The pulse waves are stronger, metabolism is higher, and circulation is better.

3. It can prevent or reduce gravitational ptosis—what is commonly called sag. The viscera sag and bulge the lower abdomen; the arches of the feet sag and the feet are flattened. When the blood pools unevenly into the feet, legs, and lower abdomen, we have ptosis. We note the drop in pulse pressure upon changing from sitting to standing. We are able to measure such circulatory ptosis by means of a test devised by Dr. C. Ward Crampton.

4. Improved capillary action in the working muscular and brain tissue results from exercise carried to the point of real endurance. Inactive capillaries are pressured open. This permits greater blood flow, and gives the muscles, including the heart, more resistance to fatigue.

Conditioning the lung capillaries is fundamental to high-level athletic endurance. Massage, heat, and moderate exercise are relatively ineffective in producing additional capillary action as compared with hard exercise. Probably the duration of exercise beyond the point of sweating (thirteen to eighteen minutes of continuous rhythmic work) does the most good. The person who has optimum nutrition is better able to produce maximum capillary action.

5. Development of collateral circulation (additional blood channels) is possible by hard use of the circulation over long enough time. This can be very important in the case of injured areas where some blood vessels have been broken or blocked.

6 Lung congestion due to lymph accumulation can be reduced or prevented by full use of the lungs in hard exercise.

7. Gas and intra-intestinal accumulation can be reduced by exercise that acts to knead and squeeze or vibrate the intra-intestinal mass. Some of the reduction in abdominal girth that exercise brings about is undoubtedly due to reduced abdominal content.

8. Fatty tissue can be reduced by endurance exercise, particularly by uphill walking or treadmill

Exercise isn't work—it's the fun-filled way to feeling fit.

climbing. A new portable treadmill made by the Battle Creek Equipment Company makes this treatment possible on a large scale.

9. Some evidence points to reduced cholesterol levels in the blood and possibly reduced cholesterol storage in the tissues as a result of persistent exercise done regularly over several weeks or months. In view of the inferred danger of excessive cholesterol, this has the possibility of preventing arteriosclerois or coronary attack. We need to know much more about this subject, but recent studies support the value of exercise in these maladies.

10. Better respiratory reserve is developed by persistent exercise. This is indicated by better breath holding, especially after a standard exercise. Exercise is easier when the respiratory reserves are greater.

11. The heart can be definitely improved by exercise. The T-wave of the electro-cardiogram can be increased in amplitude, as can the pulse wave of the large arteries in arm or leg. A fatty, enlarged heart can be reduced in size and improved in function. The oxygen-intake capacity can be increased along with the stroke volume. Such evidence, plus improved endurance, is interpreted as being beneficial to the heart.

12. Veins can be improved in tone and function. This improvement is accomplished by repetitiously squeezing and draining the blood out of them and then allowing them to fill. Vigorous use of the legs in the upside-down position will bring about improvement if the exercise is persisted in long enough.

13. Strength will increase per pound of body weight if the exercises are fast and vigorous or if persistence is used in terms of the body weight itself or in terms of a medicine ball or bar bells With greater strength there is some logical protection against strains, slipped discs, sacroiliac separations, strained and pronated feet, shoulder strains with resultant bursitis and hernia

14. Endurance at work results from being well conditioned to a particular kind of work. Both strength and circulatory-respiratory fitness are necessary to lasting a long time in a work task. High fitness in these terms prevents fatigue. Endurance helps quick recuperation.

15. Cultivation of a sport interest is good to prevent boredom, mental depression, and athletic staleness. Something different from the regular daily emphasis can lead to refreshment of a tired spirit.

16. Sport or exercise can be an important means of relaxing from intense mental labour or housewifely drudgery. Worry and anxiety can be reduced by exercise.

17. Unusual sensitivity to the environment can be reduced by improved fitness This means that

THOMAS KIRK CURETON, Ph.D., F.A.P.H.A.

Professor of Physical Education, University of Illinois, Urbana, Illinois.

a person can better endure heat or cold, and is less subject to unrest, anxiety, and itching of the skin.

18. Sweating aids the kidneys, by helping to eliminate the wastes of the body.

19. Somewhat better blood results from persistent exercise. Studies have shown improved hæmoglobin levels, relatively greater alkalinity, improved total protein content, and a greater red-cell count.

20. Quick adjustment to hard work, indicated by relatively high oxygen intake capacity, develops with hard training. It is the main quality developed by the runner advancing from the 440 yards to the mile.

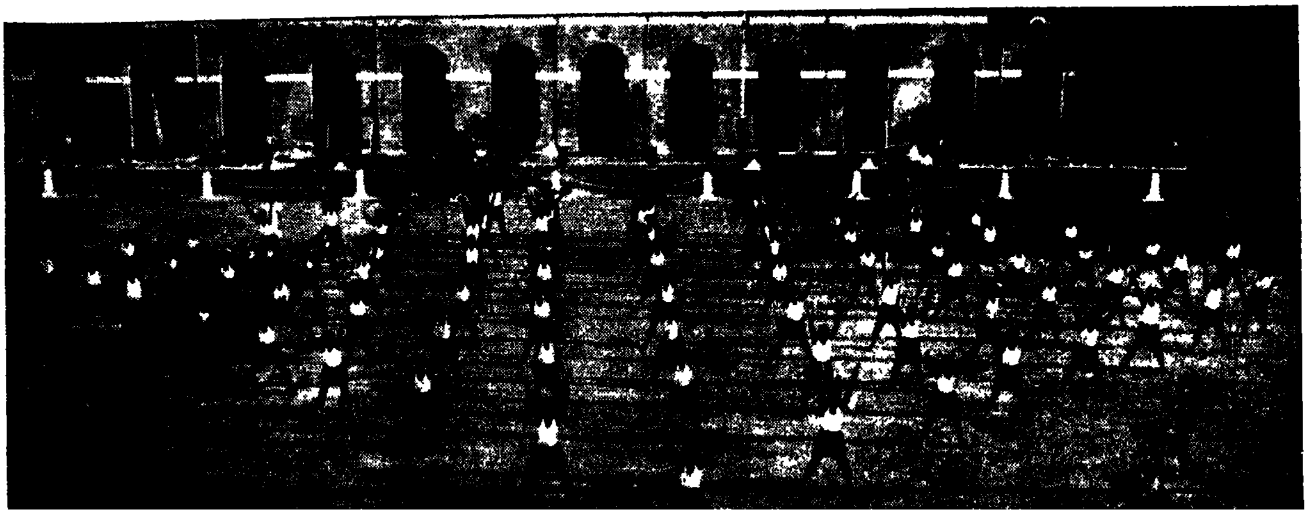
21. Power can be developed by training This means more force and speed. It is the principal basis of predicting athletic success.

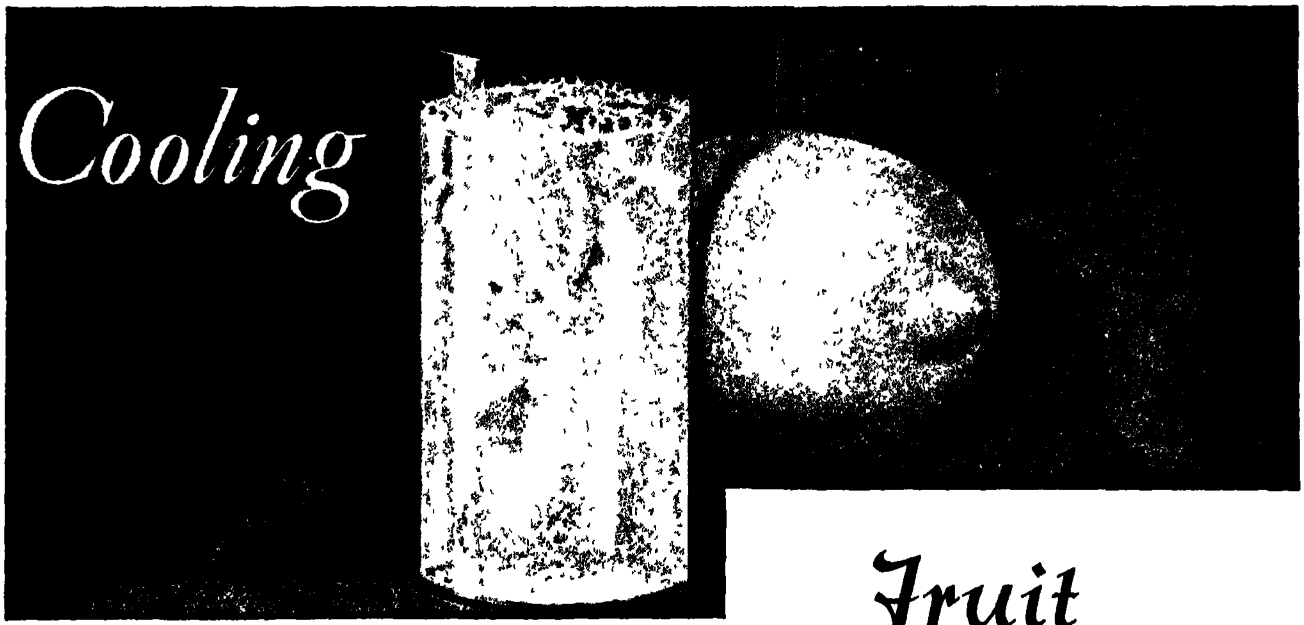
22. The kinesthetic sense (body feel) can be developed by repeated practising of movement or various postures. The diver, the dancer, the skier, the skater, all become very "body sensitive" to position in space. The tumbler or trampoliner

(Continued on p. 7)

The extent to which food can be used by the body (metabolism) is probably the best fitness test of all.

Photo R Krishnan





Cooling Fruit With A Thousand Uses

KEITH WARNER

DID you know that the common, everyday, sour little lemon can be used to proect cancer sufferers from X-ray lamage? Or that it can harden steel as well as make delicious emon meringue? It can also prevent excessive bleeding, help to nake ordinary paper bags impervious to greases so that they can hold petrol, remove ink stains, prevent ish from smelling even after several lays, stop bananas, apples, and avocado pears from turning black on exposure to the air, and even ct as a substitute for blood.

There are so many quite unxpected uses to which lemons and heir by-products can be put that is difficult in such short space to iscuss fully even the more imortant ones.

Probably the most important otential use for the future derives rom lemon-peel, because, accordig to results of experiments carried ut in the United States on rats, his product that usually ends up in the garbage pail, might serve as the main protection against the radiation effects of exploding atomic and hydrogen bombs. Rats fed on bioflavin— an extract from lemon-peel— have withstood doses of radiation that would normally be lethal.

These anti-radiation experiments derived from the knowledge gained by doctors in the X-ray treatment of cancerous growths in human patients. They discovered that patients were able to withstand much heavier doses of X-rays after taking bioflavin compounds. The radiation from exploding atomic weapons is similar to that of X-rays. And, just as cancer patients are able to stand greater doses of X-rays, so will ordinary people be able to stand much greater doses of radiation Anyhow that is what the scientists hope.

It is fairly common knowledge that lemon juice mixed with salt is excellent for removing fruit and rust stains from white garments and linen fabrics, that it acts as a bleach when put into water to soak whites, and that there are few things better for restoring aluminium ware to brightness. But few know of the recently discovered and amazing power of lemon juice in keeping fish fresh and non-smelling for periods previously thought impossible. Fish merchants now rinse or spray fish either before or after it is frozen with lemon juice. The substances that preserve the fish are the same wonderful bioflavinoids that make lemons so useful to medicine.

Lemons are believed to have originated in the Far East—probably Burma—and were first introduced to England some 400 years ago. They were known elsewhere in Europe, in Italy, some 1,600 years ago, and in the Middle East thousands of years ago. Excavations in these areas have brought to light lemon pips said to date back to 4000 B.C.

It is said they were introduced



Another strange use of lemons.

to the New World by Christopher Columbus, who planted lemon seeds there that he had picked up in the Canary Islands on his voyage over the Atlantic Ocean.

Lemon skins contain an extremely powerful oil—a few drops of which can add flavour to 50 or 60 gallons of water. Essences of lemon oil are, of course, used in many perfumes.

When one considers that lemons, lemon juice, and lemon-peel have been used since time immemorial as household remedies for fevers, sore throats, tonsilitis, rheumatism, inflammation, scurvy, colds and arthritis, one wonders why chemists and doctors had to wait until only very recently to begin experiments on this wonderful fruit

Modern experiments first developed from the knowledge that lemon pectin—the substance that sets jams and jellies—can be used to clot blood very quickly and so stem bleeding. Pectin was first used by German soldiers in the last war, who were supplied with it to put on war wounds.

From this, American doctors discovered that pectin solution could be injected into the bloodstream to act almost as a blood replacement. This gave hope to sufferers of hæmophilia- "bleeders," who can easily bleed to death from the tiniest cut New drugs developed from lemons also help to fight dysentry and diarrhœa

Citric acid, extracted from lemons, is of great use to manufacturers of lemonade beverages; as a laxative; and as an ingredient for cooking and baking purposes. Lemon-pectate is even used by oil-drillers to prevent water seepage. It seals off water by reacting with calcium to make a smooth surface for the oil drill.

Next time you use lemon juice to soften your hands or as a hair-rinse, it might be interesting to reflect on the fact that a by-product of lemon is used in the manufacture of steel to make it harder! (*APS*)

KEEP YOUR HEALTH

(Continued from p 10)

that Jackson was a vegetarian I suppose that meant he excluded meat from his diet"

Smart man, this Jackson, to discover that meat in the diet tires your muscles, whether your biceps, leg, or heart muscles Repeated tests have shown this endurance to be as high as one hundred per cent greater when meat is not eaten Heart patients may cash in on this fact With them endurance is of major importance

I agree with Dr. Hindhede, of Denmark, who, during the first world war, fed the Danish nation largely on a vegetarian diet Thereby he cut the death rate thirty-four per cent in 1918 and established a world record for low mortality. He said that men were better to experiment on th n rats The only trouble is that rats are more easily caught and controlled than men, for "bringing up father" is often most difficult indeed

MAKING THE MOST OUR RELATIVES

(Continued from p. 3)

asking you questions. This bit of philosophy we take for granted when dealing with other people, we forget it when we rub shoulders with our own flesh and blood. Kinsfolk are people just like us and should be treated with courtesy and respect. The kind of treatment you hope to receive from your relatives is exactly the kind of treatment you should give them. Stay on the giving side and don't expect too much in return. Here's a chance for the golden rule to operate and take the measure of every family situation, with the most blessed results.

Then to the task of making the relatives a pleasure: Blood runs thicker than water, you know, and there is nobody like the home folks. That gray-haired little lady that you call mother-in-law is your wife's mother. Don't forget that. Ignore the artificial barriers between. Break them down, and live abundantly with all who name your name or come under your influence. You will never get any place with them if you are abusive, distant, or aloof. You can have their respect and affection if you make the most of them, but remember, don't try to make them over, or you might land in the hospital.



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Try each day to bri
new thou

IF WE could read the innermost thoughts of a husband or a wife a few weeks after the wedding we would find a shocking question occupying more than its share of the scene: "Is ours going to be as happy a marriage as I had hoped it would be?"

After the honeymoon there comes a time when a recently married person goes through an experience often described as disillusionment. Persons who were much in love during their courtship now see each other divested of some of the wonderful attributes that seemed conspicuous only a few weeks earlier.

Having removed his rose-coloured glasses, the young husband finds that the girl who told him sweetly that she loves to cook finds it hard to plan three meals a day. In fact, some of the dishes she prepares are not appetizing. Already she is complaining that "just keeping house" is monotonous. He may find her in tears for no reason than that she is homesick

The young wife also has been *making some observations*. She discovers that the young man she had supposed to be the fulfilment of all her dreams has several human weaknesses. When he called on her during their courtship he was always well groomed. Now that they have lived together a few weeks she finds that some of his ways are actually repulsive. He does not change his socks as often as she thinks he should. He is careless about brushing his teeth. He comes home late to dinner with no explanation but that he was talking to a friend. Sometimes he is grumpy and even speaks sharply.

Lovers are on their best behaviour during courtship. Once they are married they live with each other twenty-four hours a day. Each sees the other at his worst as well as at his best.

Many circumstances that contribute to difficulties of the after-marriage adjustment are carry-overs from former years. Often they are the result of the difference in the couple's childhood environments. Certain things that were customary in their two separate homes—things they each learned to take for granted—may be surprising or even astonishing to the other.

An ideal marriage is a wholesome partnership.
Photo R Krishnan



They had different childhood backgrounds, and so they find it hard to become accustomed to each other's ways.

The wife's father may have been very chivalrous to his wife and daughter. Quite naturally his daughter believes that a gentlemanly husband will be the same. But her young husband may come from a home in which the father was very matter of fact and the mother and sisters had to take their full share of the hardships. Coming from such homes, the young husband will expect his bride to be stoical and to ask no favours, and the young wife will expect him to be dutiful to her and to shower her with special considerations. This can be the reason for the newly married husband's feeling that his wife reacts like a baby, whereas her appraisal of him is that he is inconsiderate or even ungentlemanly

It is said that money is the greatest single cause of disharmony between a husband and a wife Money is only a medium of exchange, yet it becomes a symbol of the things the heart craves. If there

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CK, M.D.

new to your marriage—
experiences.



B Ranganathan

is sufficient money, desires can be realized and hopes may be attained. If money is lacking, there develops a thwarted attitude at times.

In our way of living, money represents power. The husband's status is bolstered because he earns the money. Sometimes he takes advantage by trying to dictate as to the use of the money he has earned. To the wife money is a means of furthering their combined interests. She does her share in maintaining the family unit, and reasons quite correctly that she should have an equal voice in deciding how their funds should be spent.

Young people are often surprised after marriage to learn that money does not come as easily as they had supposed it would. Also, once earned, it does not buy very much. Unexpected expenses use up the money almost before it is earned

When the husband's earnings do not go as far as the young wife had expected, it is easy for her to become critical or to fear that her husband's enterprises are not succeeding as well as they should. Similarly, problems of finance can make a husband critical of his wife.

It is usually agreed that the wife will carry the responsibility of making the household purchases In his inexperience the young husband supposed that a few rupees well managed would provide the needs of the home for one or two weeks When his wife announces before the time has passed that the money is gone, he assumes that she has spent it carelessly He begins to question her as to how she spent the money. This causes her to feel that she is not trusted.

The handling of money requires close co-operation between husband and wife The more they understand each other's problems the easier it will be for them to arrive at an agreement in finances During their period of adjustment, while they are still building confidence in each other, it is best to lean heavily on the budget method of handling funds. It is better to take a litle time in planning a budget than to experience the misunderstandings that result when each one works independently in trying to handle their money.

Their is no magic in a budget, but it does serve well to keep each party informed as to the amount of money available and its limitations.

There should be frequent occasions when husband and wife spend an hour together studying the progress they are making in living by their budget.

A new husband, sensing his status as "head of the house," proceeds to order the customs of the new home after the pattern of his parents' home But the wife naturally offers resistance to whatever differs too much from the customs of her childhood home. For her to give in too readily would be equivalent to admitting that her home background was inferior to his

When the parents of either of the newly-weds live near, an added complication is introduced. It is humiliating for the new wife or the new husband to allow his parents to know that he has to concede certain points of difference. The parents naturally feel that what was good enough for them should be good enough for the next genera-

tion. They encourage their son or daughter to hold out for certain wishes. This is part of the reason for the counsel given in the Scriptures: "Therefore shall a man leave his father and his mother, and shall cleave unto his wife: and they shall be one flesh."

Many husbands and wives try to measure the happiness of their marriage by their freedom from differences. A couple that seldom quarrels assumes that theirs is a happy marriage. Other couples that quarrel fear that they have come short of the full measure of happiness they might enjoy. But happiness or unhappiness is not determined by the number of arguments one has.

Ideal marriage is a wholesome partnership in which each member respects the ideals, opinions, and preferences of the other, even though these may be somewhat different from his own It is acceptable for a husband and wife to have different opinions provided they do not allow these differences to rob them of their respect for each other.

A husband and wife should be free to discuss their differences. Freedom to talk things through is actually the best assurance of a final good adjustment in marriage

The greatest peril to marital happiness is not in expressing differences but in remaining silent Silent misunderstandings tend to produce mounting antagonisms. Finally there comes a time when the pent-up grievances force their way to the surface, with a result that may be disastrous to the happiness of the marriage.

All couples pass through a period of adjustment after the wedding. In some cases the adjustment is more difficult than in others. The most difficult adjustments face the husband and wife from vastly different backgrounds. In these cases it takes longer for each partner to learn what to expect of his spouse.

Even in difficult cases it should be remembered that the husband and wife who have problems are the same two persons who found many things in each other to admire during their period of courtship. If during the period of adjustment, they focus on each other's desirable traits, rather than shortcomings, they will find that the adjustment can be worked out quite smoothly. Every marriage is worth saving.

A marriage can become happily successful when husband and wife unite in a sincere effort to understand each other.

Generosity in love, thoughtfulness, and consideration is insurance for the health of all marriages.

SILVER OR GOLD?

(Continued from p. 8.)

it crumbles rather than bends when subjected to undue stress. For this reason the use of amalgam is limited to certain types of cavities.

In some types of fillings your dentist will recommend the use of gold. He will have to make what is called a gold inlay.

In this delicate process he first prepares the cavity carefully to remove all decay. He shapes the cavity as a tapered slot, or keyway, with a broad entrance and a narrow base. Wax is heated till it is soft, and then it is forced into the prepared cavity. It forms a pattern, or mould, of the cavity The wax is allowed to cool and harden, and then it is gently removed and imbedded in plaster of Paris, which is allowed to set. The wax mould is then melted out, leaving an exact pattern of the cavity. Molten gold is cast in this mould

This process has been used for centuries in the construction of bronze statues. Artists carve the exact shape of the statue in wax. Plaster of Paris is poured around the wax statue. When the plaster is fully set, the wax is melted out, leaving a hollow. Molten bronze is poured into the plaster mould. When the bronze is fully solidified the plaster is broken away Finishing and polishing complete the process.

Generally speaking, cavities can be classified into three groups.

1. Some can be filled successfully with amalgam only.

2 Others may be filled with either gold or amalgam.

3. In the third group gold inlays may be the only successful replacement.

Only your dentist is able to decide which type of filling material will be best for you. Be guided by his advice, and you will doubtless get years of satisfactory service from your amalgam and gold fillings.

STOMACH ULCER OR CANCER?

(Continued from p. 9.)

certain races of people than others, and in certain localities. The incidence of cancer of the stomach among the Japanese on the West Coast of America is notoriously high. About half the deaths from cancer in Japan are due to cancer of the stomach. Only about one-eighth of the deaths from cancer in the United States are due to cancer of the stomach.

It is known that cancer of the stomach is more common in certain families. Napoleon Bonaparte's

family is **perhaps the most famous one in which the tendency has been noted. Napoleon, his father, his grandfather, one of his four brothers, and all three of his sisters are said to have died of cancer of the stomach.**

In Denmark an extensive study was made of the relatives of more than three hundred proved cases of cancer of the stomach. It was found that there were four times the number of cancers of the stomach among the relatives as among a control group. Cancer in the rest of the body was about the same for the two groups.

Cancer of the stomach is treacherous. Its cure rate unfortunately has been low because it has not been diagnosed early enough and because patients have neglected the early symptoms that did manifest themselves. There are no typical early symptoms of cancer of the stomach that are reliable in making a diagnosis. Most of the symptoms known to the public, such as pain, loss of weight, and inability to retain food, have been the symptoms of late, incurable cancer. Certainly indigestion of any kind that lasts more than a few weeks in a person past the age of forty, particularly in a man, should be thoroughly investigated by the family physician. This investigation includes not only the taking of a good history and an examination but also checking of the blood, X-ray pictures of the stomach, and pumping of the stomach to test for acid and tumour cells. It is well known that patients with low acid or none at all have a higher incidence of cancer of the stomach than those who have a normal amount of acid. It is also well known that patients with pernicious anæmia have no acid in the stomach and also have a higher incidence of cancer of the stomach.

Patients who have polyps should be observed frequently and should preferably have the polyps removed, because of the increased incidence of cancer.

Additional tests are sometimes required to make the diagnosis. The gastroscope, a special instrument, was devised to be passed through the mouth into the stomach. By means of the gastroscope the inside of the stomach can be viewed. It has been helpful in many patients.

I cannot emphasize too strongly that there is only one cure for cancer of the stomach today. It consists of entire removal by surgery. Special diets, such as the "grape juice cure," and nostrums to be injected by hypodermic or taken by mouth have proved a danger. X-ray therapy or radioactive elements have proved of very little, if any, value in this disease. The aim in curing cancer of the stomach is to remove all the cancer and adjacent tissues that may be involved. The removal of all the stomach has been accomplished in many patients today, and it is compatible with life.

In years past, the number of patients that were cured of their cancer, I am sorry to report, was woefully few. Recent reports indicate that this trend is becoming more favourable. The Mayo Clinic, for instance, has recently reported nearly three times as many patients alive at the end of five years as they were able to report in 1938. Similar reports have come from other clinics.

Ulcers of the stomach are more common under the age of forty. Cancer of the stomach is more common beyond forty. The X-ray is the best single tool for diagnosing both ulcer and stomach cancer. Other tests are also helpful. Duodenal ulcers can be successfully managed with diet and medication when combined with mental and physical rest. For the complications of ulcers, surgery offers a high percentage of improvement or cure. Anyone past forty with indigestion or dyspepsia would be wise to have an X-ray taken of his stomach.

At any suspicion of cancer of the stomach the patient should be operated immediately. The only cure available for cancer of the stomach is surgical removal. Patients tolerate this procedure very well. Any person with known pernicious anæmia, polyps of the stomach, low acid, or gastritis would be wise to have periodic examinations by X-ray because of the increased frequency of cancer in these conditions.

Avoid tobacco, alcohol, coffee, tea, and condiments to help prevent the two common ailments, ulcers and stomach cancer. Avoiding them will also certainly aid in the treatment of ulcers, if not of cancer.

It's *your* stomach. Take care of it!

Advance In Surgery of The Heart

Notable Success of British Surgeons

WILLIAM A. R. THOMSON, M.D.

COURTESY B.I.S.

TIME was, and not so very long ago, when the heart was looked upon as "no-man's land" so far as surgery was concerned. To attempt to operate upon it was considered so hazardous that it was only in cases of dire emergency, as when the heart had been injured in an accident, that surgeons would consider operating. Today operations are being carried out on the heart in their thousands in every civilized country in the world—and not only by specialists

STOPPING THE HEART

Some of these operations are now so standardized that they can be carried out by any experienced surgeon. A surgeon, who ten—or even five—years ago would never have dreamt of attempting cardiac surgery (as it is known), will today think nothing more of performing certain operations on the heart than he would of performing any other major operation such as the removal of a diseased gall-bladder or an enlarged prostate.

Others of these operations are so complex that only the expert can carry them out, and then only when he has available a special unit especially equipped for the purpose. While there will always be a certain number of these operations which can only be carried out in such special units, the experience of the last few years has shown that in time many originally complex operations can be modified in such a way that they can ultimately be performed by any experienced surgeon.

Many factors have contributed to these dramatic advances, in which British surgeons have played an outstanding part. These include the introduction of the antibiotics, advances in anæsthesia, and a greater understanding of the action of the heart and of how this is disturbed in heart disease. But perhaps the greatest contribution has been made by the discovery of methods whereby the heart can safely be arrested for a time.

EASY AND SAFE

As can well be imagined, the task of the surgeon operating on the heart is considerably eased if he can stop the heart beating for a time. Such arrest of the heart is not necessary in all operations on the heart but in the more complex operations that are now being performed the ability to arrest the heart for a period of time makes the task of the surgeon much easier and improves the outlook for the patient.

Curiously enough, it is comparatively easy and safe to stop and then re-start the beating of the heart. The trouble is that at the normal temperature of the body the cells of the brain are irreparably damaged if they are deprived of their blood supply for more than two to three minutes. If however, the temperature of the body is lowered to 28°C. (the normal body temperature is 37°C.), the heart can safely be arrested for 8 to 15 minutes without causing any damage to the delicate cells of the brain.

Methods have now been evolved whereby this state of lowered body temperature—or hypothermia as it is known—can safely be induced in man, and they are now in regular use in operations on the heart.

HEART-LUNG MACHINE

The latest advance in this field is the introduction of heart-lung machines. These take over the action of the heart and maintain the circulation in the body at normal temperature. In this way it is possible to stop the heart for periods up to 20 minutes, the heart-lung machine meanwhile maintaining the circulation of blood throughout the body.

To gain a right perspective in this dramatic story, it is essential to realize what cardiac surgery cannot do. It cannot replace damaged heart muscle. The time will probably come when, by improving the

blood supply to the muscle of the heart, the surgeon will be able to do much to improve the outlook for those patients with angina pectoris or coronary thrombosis, whose main trouble is that the blood supply to their heart is inadequate. Such operations have actually been attempted, but the results have been disappointing, and much more experimental work requires to be done in order to evolve a safe and satisfactory method of performing such operations.

Rheumatic Heart Disease

What the surgeon can do—and most effectively in many cases—is to take the strain off the heart muscle and thus allow it to function more efficiently. This means that there are two forms of heart disease in which cardiac surgery has an important role—rheumatic heart disease, and congenital heart disease.

In chronic rheumatic heart disease much of the trouble is due to obstruction to the flow of blood through the heart as a result of damage to the lining membrane of the heart. This obstruction produces an additional strain on the heart muscle in its attempt to maintain as adequate a circulation of blood as possible.

If this obstruction could be removed, then with much less effort, and with much more efficiency, the heart muscle would be able to supply the body with its essential amount of blood This is precisely what the surgeon does and it is in this field that the greatest scope for cardiac surgery lies.

The commonest obstructive lesion in chronic rheumatic heart disease is what is known as mitral stenosis —obstruction of the opening between the two chambers on the left side of the heart It is estimated that there are at least 100,000 cases of mitral stenosis in Britain, between the ages of 18 and 44, and four-fifths of them will require surgical treatment sooner or later. Thousands of such patients have now been operated on, with satisfactory results in the vast majority of cases



Photo by U.S.I.S.

Lowering of body temperature is in regular use in operations on the heart.

Congenital Heart Disease

Even more dramatic are the results that are being obtained in the unfortunate victims of congenital heart disease—that is, children who are born with some abnormality of the heart. This abnormality usually consists of some defect in the structure of the heart which interferes with the free flow of blood through the heart. As the heart muscle is usually healthy, many of these cases lend themselves to successful surgery.

The scope for surgery in this field alone is indicated by the fact that congenital heart disease is found in 0.1 per cent of all who survive infancy and that it accounts for 1 to 2 per cent of all heart disease in Britain. Not all of these cases are amenable to surgical treatment, but many of them are. With increasing experience it is proving possible to operate successfully on an increasing number of them

The Future

There must be many hundreds of children and young people now living useful, if quiet lives who, before the days of cardiac surgery, would have been condemned to lives of chronic and disabling invalidism

Cardiac surgery is one of the youngest of the specialties but it already has a long list of distinctions to its name. In the achieving of these distinctions British surgeons have played an outstanding part, and all the present evidence indicates that on this steadily advancing front in the offensive against disease, the great traditions of British surgery will be well maintained, and indeed enhanced.

STORY TIME

ROY'S FRIEND

A Splendid Christmas Story From a Cold Country

MALLIE C. LACY

"I WISH I had a sled," sighed Roy. "All the boys are going out to coast on the park hill. Just see them, Mother!"

"Mother wishes you had a sled too, Son; it is too bad that I haven't the money to get you one; but it seems somehow that with all the shoes and stockings and coal, —" Mrs. Bryant began to answer sadly.

"Oh, don't feel bad, Mother dear! I don't need a sled. The boys let me ride with them, and sometimes John lets me ride in front and guide. Oh, but it is fun!" said the unselfish lad, who had been so quick to see the pain in his mother's eye.

"Never mind, Roy, perhaps Christmas will bring a sled!" and some slight measure of happiness seemed to come back into Mrs. Bryant's eyes and to her heart.

Mrs. Bryant had been left a widow a year before. She was not a strong woman, and with her eighteen-month-old baby and ten-year-old Roy she found it a problem to make her small income go all around, especially in the winter time when it was necessary to buy so much fuel. There was very little left for pleasures and the little extras that boys and girls like to have.



Her words were cut short by a



rap at the door. It was Mrs. Holland, the next-door neighbour.

"I wonder," she inquired, "if Roy would kindly go down to the milk station, to bring me an extra quart of milk. It is quite cold and so early that I hesitated to ask him; but my brother came in very unexpectedly about two o'clock this morning. He likes oatmeal so well; and when I looked in the pantry, I found that we had used up every drop of milk for supper last evening. He is just getting up, so Roy will have plenty of time to get back before he is ready to eat," she continued as Roy began to put on his sweater and cap and gloves.

"I shall be glad to go," he replied, and he looked very pleasant about it. Roy's motto was, "Do at least one good turn each day," and this was his chance.

As he was going down the street to the milk station, he met Jack Sellers with his bright new sled going toward the park hill.

"Aren't you coming out this morning, Roy?" inquired Jack. "All the boys are going to the hill. You'd better come along with me."

"I'll be out soon," he answered, trying to choke back a lump in his throat, which persisted in coming up every time he looked at Jack's splendid sled. "She's a daisy," he said as he pointed toward it.

"Father brought it home to me last night Come on out, and you may ride with me first," Jack challenged

"Sorry, but I have to go after some milk, and then I'll be out," answered Roy.

"Hurry up about it!" said Jack, and he started on toward the hill while Roy continued in the opposite direction, toward the store.

Roy was not gone long, and arrived just at the time that Mr. Brown (that was the name of Mrs. Holland's brother) came out of his bedroom, ready for breakfast.

Now Mr. Brown had a big, round sunny face, and every boy who had the slightest acquaintance with him enjoyed his presence.

And that is exactly what happened between Roy and Mr. Brown. Roy had stepped inside because Mrs. Holland had insisted that he should, and she had said to her brother, "Fred, this is Roy Bryant who lives next door. He is a



fine little neighbour."

At this, the big, jovial man came over and shook Roy's hand and exclaimed good-naturedly, "I'm glad to know you, Roy. How's the weather outside? I peeped out of the bedroom window a little while ago toward that park hill I see those chaps are having a fine time over there. Made me wish that I were a boy again. Going to take your sled over and join the fun, aren't you?"

"I haven't any sled, but I'm going over as soon as I run home and make sure that there is plenty of coal in the house for Mother this morning," answered the boy.

"What, no sled?" inquired Mr. Brown.

(Concluded Next Month)

HOMEMAKERS' HELPS

Mary Ninaj Larson

NUTRITION PROJECT

HAVE you ever thought of the contribution that an organization you belong to can make to the health and well-being of your community? One such group, the Dorcas Society of Salisbury Park in Poona, set out on just such a course. The Dorcas Society is organized primarily to help relieve the immediate distress of those in need. However, this year the ladies decided to extend the scope of their activities and organized a series of open lectures and demonstrations in the field of nutrition and cooking.

They organized a series of six lectures dealing with the most basic factors of wholesome nutrition—minerals and vitamins, fats, carbohydrates, proteins, grains, temperance and good health practices. And one evening was given to Dr. D. P. Bharucha, a well-known dentist in Poona, to speak on the care of our teeth.

And what did they learn from week to week?

Here is a brief resume.

The first lecture, dealing with minerals and vitamins, revealed that all fruits and vegetables contain substances which have profound effects upon the body and contribute directly to its well-being and help to keep it in vibrant health.

The yellow-coloured fruits and vegetables and green leaves are packed with vitamin A, that vitamin which helps to keep the mucous membranes and the skin healthy and strong so that germs cannot get through. Because germs cannot get through, the body is protected against many serious infectious diseases. An adequate supply of this vitamin also helps mothers bear healthier children and helps them to produce and maintain an abundant supply of wholesome milk for nursing their children.

Vitamin C keeps the blood pure and of proper composition. It keeps the blood vessels strong, and consequently prevents the blood from leaking out of the blood vessels. It is this leaking which causes "black and blue" spots whenever we bump ourselves. Vitamin C also helps other vitamins in the building of the body tissues.

Vitamin C is found in tomatoes, in limes, lemons and other citrus fruits, and in guavas. Nellikai ("a m l a", "amlaki", "anvla", "usirikayi") is, however, the richest source, for one nellikai has as much vitamin C as one or two oranges.

Green leaves, as well as milk in any form, are a rich source of calcium, which is necessary for strong and straight teeth and bones. Green leaves are also a good source of iron, that element which gives the blood its rich red colour and which enables the blood to carry

RECIPES

CURD SALAD

Ingredients:

Cucumber, tomatoes, green onions, thinly sliced carrots, capsicum, and curds.

Method:

Cut the cucumbers, onions, tomatoes, and capsicum into small pieces. Salt slightly, and just cover with curds. Keep cold. Good with rice or chapatties and curry.

CREAMED PUMPKIN

Ingredients:

Pumpkin, cream or butter or margarine.

Method:

Steam or cook the pumpkin in a small quantity of water. Salt to taste. Mash with a fork. Add a small amount of cream, butter, or margarine. Serve hot.

FRESH SALAD PLATE

Ingredients:

Lettuce, tomatoes, cucumber, capsicum, carrots.

Method:

Arrange lettuce on a large platter Place sliced tomatoes in two rows Put sliced cucumber around the edges. Decorate with slivers of capsicum and carrot.

oxygen from the lungs to every part of the body. When there is not enough iron in the food, we become anæmic, and we do not have enough energy to carry on our work properly because the tissues cannot get all the oxygen they need.

Energy is provided by the carbohydrates and fats. The carbohydrates are the sugars and starches. Included in this group are all sugars, cereal grains, potatoes, yams and other root vegetables, and fruits.

A certain amount of carbohydrate foods is necessary, but too much of carbohydrate-containing foodstuffs, such as rice, reduces the protective effect of the minerals and vitamins eaten. Those who eat too much of this kind of food become stout; there is danger of tooth decay; and one becomes susceptible to certain infectious diseases

Fats carry the vitamins A, D, E, and K. They also help the body to use calcium. Fats are stored in certain parts of the body to protect certain vital organs. They prevent loss of heat from the body, and help make the body beautiful. The oils are superior to the solid fats, for the latter carry too much cholesterol, which has a tendency to settle in the blood vessels and bring on what we commonly call "hardening of the arteries," and heart disease

At present the caution is to eat very few fried foods, to use oils in preference to solid fats, and to season foods with only a small amount of fat.

Nuts are an excellent source of a good wholesome fat. However, too many nuts should not be eaten

The proteins are foods which are necessary for growth in children, and for repair of worn-out tissue in both adults and children. A diet that contains pulses, nuts, and milk will contain an adequate supply of protein for growth and repair.

Dr. Bharucha in his enlightening lecture discussed the formation of

(Continued on p. 5.)

CARE OF THE BATHROOM

PAUL I SMITH

THE modern bathroom with its gleaming porcelain bath and lavatory basin, stainless metal fittings and brilliant mirrors needs constant care to maintain its pleasing and hygienic appearance. The bathroom soon loses its good looks if the bath is stained, the mirrors dull or the taps dirty

Sometimes the bath becomes stained owing to the presence of iron in the water, or the use of certain bath salts In most cases, however, the trouble can be directly traced to a dripping tap The slowly forming drops of water gradually dissolve a tiny trace of iron from the tap and in time this causes a dark yellow streak to form on the side of the bath Obviously prevention is better than cure and care should be taken to see that the washers are sound and the taps in drip-proof condition If, however, the stains are rather noticeable and not easily removed by ordinary cleaning methods, then a solution of one part of spirits of salt dissolved in fifteen parts of cold water will help to dissolve away the iron Directly the yellow stains have disappeared the bath should be thoroughly washed out with warm water, well dried with rags and polished.

Many housewives shorten the life of a good looking bath by the constant use of coarse scourers which scratch the fine enamel or porcelain surface and do a considerable amount of harm. Instead of abrasive powders, a flannel soaked in turpentine and paraffin, equal parts, will be found a safe and easy way to keep the bath and lavatory clean.

Stainless metal requires little attention, but this does not mean that it can be neglected with impunity. Every day the taps should be wiped with a moist window leather and polished with a clean dry one. This only takes a few moments and the brilliance of the metal certainly compensates for the small amount of trouble involved. The same treatment for mirrors is also recommended. Plate glass shelves and other fittings should always be well washed in hot soapy water, then thoroughly rinsed in warm water containing a little vinegar, about a tablespoonful to the pint.

Cork and rubber mats stand any amount of washing, but it is advisable to dry the surface with a cloth so that the moisture does not evaporate and make the room damp. Asbestos-cement panelling and splashbacks only need wiping down with a damp window leather and polishing with a dry cloth, no other treatment is necessary.

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Home and Health

Home and Health

The Editor Says



The Toothpaste created by a dentist.



GARDENING FOR HEALTH

MANURE MAGIC

D. G. Cooper

MANURE is necessary to all plants at all stages of their growth. The judicious application of the correct manure at the right time, will make a world of difference in the growth of the plant Too often a gardener is perplexed to see just the opposite results of what he had expected, after giving his plants a certain type of manure. Others who are over-anxious to obtain quick results, give the plants an excess amount of manure. In both cases, the results are not only disappointing, but are also a waste of money.

A little knowledge of the composition of manure and its effect on plants, will go a long way towards solving the problem of what type of manure is to be used Roughly speaking, manures may be classified as organic and inorganic The former consists of such fertilizers as humus, animal manure, green manure, bonemeal, dried blood, etc. Inorganic or mineral manures consist of chemicals such as Nitrate of Soda, Ammonium Sulphate, Phosphate, Nitrate of Potash, etc. None of these chemicals in itself is sufficient as a plant food, but a combination of Nitrogen, Potassium, and Phosphorus in the right proportion will form a perfect fertilizer.

Nitrogen in all forms, whether natural or chemical, is vitally necessary to all plants in promoting leaf and stem growth. Nitrogen is readily available in dried blood, poultry manure, cow and sheep dung oil cake, Nitrate of Soda, Sulphate of Ammonia, and Calcium Nitrate

Potassium is indispensable to young plants, as it builds healthy tissues and makes the plants less susceptible to various diseases The main source of Potassium lies in ashes, bonemeal, horse manure, Nitrate of Potash, Sulphate, and Muriate.

Phosphorus is invaluable for root growth. It not only helps the plant to mature earlier, but also increases the yield of seeds in grain crops. Animal bones, fish manure, rock phosphate or acid phosphate and basic slag, are the best sources of phosphorus.

Well-rotted cow dung manure is unrivalled in the benefit it promotes in all plants It contains all the three elements, viz., Nitrogen, Phosphorus and Potassium, so essential to plant life

Leaf mould is another rich source of natural manure It can be easily prepared by digging a deep pit in the corner of any vacant plot Leaves, grass clippings, garbage and kitchen refuse, should be emptied into the pit till it is quite full This should now be covered over with a thin layer of soil After a period of about eighteen months,

GARDEN CALENDAR FOR DECEMBER

Plains

Vegetables:	Sow seeds of Cress, Mustard, Lettuce, Radish, Peas and Dwarf Beans
Flowers	Sow Browallia Elata, Nicotians Sanderae, Linaria and Mignonette Make cuttings of Geraniums, Pinks, Carnations, etc

Hills

No flowers or vegetable seeds can be sown during this month

when the pit is dug up again, the decayed vegetable matter will result in an excellent manure.

In using manures and chemical fertilizers, a few basic points should always be kept in mind:

Never use fresh manure, as it generally contains insects and slugs, which feed on roots, thus causing considerable damage.

Chemical fertilizers should always be forked into the soil around the plants. Direct contact with the foliage will injure the plants.

An excess of any manure is always harmful to the plants. A smal quantity, given at shorter interval: is a wiser plan.

Liquid manure is most efficaciou if given when the plant is about t‹ bear flowers or fruit.



THE DOCTOR SAYS

[illegible] made to the [illegible] regular [illegible]

[illegible] be addressed to The Doctor [illegible] with [illegible]

[illegible] ADDRESSED [illegible] STAMPED ENVELOPES. Answers cannot [illegible] ONE MONTH.

[illegible] Post Cards will not [illegible]

[illegible] short and to the point [illegible] very clearly.

[illegible] and answer will be published [illegible] of such a nature as to be of [illegible] without objection but no [illegible] Address: The Doctor [illegible] Watchman and Herald of Health, [illegible] Box [illegible] Poona [illegible] India.

?

[illegible]HES Ques.—"For the [illegible] three years, I suffer from [illegible] of headache. I pres[illegible] in the head [illegible] the headache is severe [illegible] perspiration. Only the use [illegible] relieves the pain. Kindly [illegible] what to do?"

[illegible] are many types of [illegible] to a host of different [illegible] headaches are caused by [illegible], others by sinus [illegible] strain, etc. I would [illegible] be examined by a physician who could [illegible] cause and prescribe the [illegible]. If [illegible] relieves [illegible] as needed.

?

[illegible]LIBACY Ques.—"Both Chris[illegible] and Hindu religions advocate celibacy as the best tonic for physical, mental and spiritual well-being of mankind. What is your opinion about it as it concerns married people? Is celibacy practised in married life harmful to the couple?"

Ans.—Celibacy is all right, but absolute celibacy is not best in married people and may actually be harmful. The Christian religion does not advocate celibacy for married people.

?

LEPROSY: Ques.—"Ayurvedic doctors classify leprosy into eight classes whereas Western doctors do it in four. Is this correct? What are the distinctive symptoms of these four varieties?"

Ans. Western medicine today officially classifies leprosy under two main types: 1. Lepromatis or Nodular Leprosy. 2. Neural Leprosy. Neural Leprosy is divided into two subtypes: a. Anæsthetic Atrophic type. b. Maculo Anæsthetic type.

Lepromatis Leprosy is characterized by nodules, which are begun usually as Bilateral Macules with raised edges. They appear in the lobes of the ears, forehead, eye brows, cheeks and chin. They are also common on the extensor surfaces of the fore-arms, thighs and buttocks. At first they are tender, but later pain and temperature sense is lost, and there is swelling in the involved areas. The face in time takes on the lion-like appearance. In Neural Leprosy, areas of the skin served by certain nerves lose sensation. These skin areas can be seen to be different in appearance, and sometimes have a red border surrounding a pale centre. The nerves when felt are thickened and nodular. The muscles of the hands decrease in size and the bones of the fingers and toes are gradually absorbed. Frequently one of the early signs of this disease is a kinking of one of the small fingers of the hand with loss of sensation to pin prick in the finger.

?

ARTHRITIS Ques.—"I am eighty-two years old and for the last 20 years have been suffering from Arterio-sclerosis and Low Blood Pressure. Two and a half months ago I fractured my right leg. I was put in plaster in the general hospital. When the plaster was removed about two months later, I could not bend my knee. I used various medicines and ointments but got no relief. Later it was found that I had Rheumatoid Arthritis. Kindly let me know what to do for this as all the injections and other treatment have proved a failure."

Ans.—At your age and following plaster of the broken bone, I do not think there is much that could be done to relieve the resultant arthritis. The best treatment is physical therapy. You should apply heat to the joint in the form of hot packs, which can be prepared using pieces of 50 per cent cotton and 50 per cent wool blanket rung out of boiling water. Place a towel between the hot packs and the affected joint to prevent burning the skin. Put these packs on 30 minutes each day. Follow this by a gentle massage and manipulation of the joint. I know this is difficult to do by oneself. It would be better to have it done by a regular physical therapist. There is no medicine that will cure this type of arthritis. You could use some Methyl Salicylate to rub on, when pain is present.

?

DEAFNESS Ques.—"I am twenty years old and am a victim of deafness. I can hear slightly with my left ear but have great difficulty in recognizing sounds with the right ear. When I was about six years old I had a whitish pus-like discharge from my ears but did not receive any treatment for it. My father suffers from deafness, and my seven-year-old sister has an ear discharge which is whitish yellow, and has an offensive smell. Kindly give me your advice to help cure my deafness."

Ans.—Without examining you carefully, as well as your father and sister, it is not possible for me to diagnose the nature of your deafness. I am impressed by what you have told me, however, that deafness is due to middle ear infection. I presume that your ears are perforated, and the drum scarred, hence do not function properly. Hearing aids may take care of your difficulty. Recently some have been developed which are not too expensive to operate. These can be obtained in the large cities. If you have a chance to visit one of these larger cities, you should make enquiries about the possibility of trying one out.

For treating a draining ear it is necessary to use some effective Antibiotic for a long enough period to destroy the invading organisms. Along with this, we advise the use of nose drops such as Neosynephrine 1/4 per cent to shrink the nasal mucosa, thus permitting the Eustachian tubes to open. We also advise the use of some Hygroscopic ear drops containing some sulfa or Antibiotic. This combination for a period of time may result in cure. The treatment should be conducted by a well-qualified physician.

THE LAST WORD

GEORGE M. BAROYA

"Cobalt Bomb" for Treatment of Cancer

A RADIOTHERAPY unit—popularly known as the "cobalt bomb"—was formally put into commission at Westminster Hospital, London, on November 4 by the Lord Chancellor, Viscount Kilmuir, who described it as a "contribution to the welfare of people who needed the best treatment for cancer."

The Lord Chancellor said it was a great and cheering thought that the gift made use of atomic energy for peaceful purposes. "The gift that we are now receiving enables the hospital to use cobalt from atomic piles in the treatment of cancer."

Sir Stanford Cade, head of the radiotherapy department of the hospital, said they would apply this "weapon" to shoot straight and accurately at a target which had been described as "the greatest enemy of mankind."

Operated from behind lead doors by remote control, the equipment, which is embedded in concrete, swings a giant horseshoe round the patient.—*B. I. S.*

Pillow Radio for Patients in English Hospital

A BRITISH firm has installed a sound-reproducing system, including "pillowphones" as one of its new features, at the North Cambridgeshire Hospital in Wisbech, England. The introduction of pillowphones means that individual radio listening in complete comfort is now available for open-ward patients.

In an office on the ground floor of the hospital there is a control, receiver, and amplifier assembly fitted with an automatic time-switch to switch on and close down at required times, but, if desired, the relaying of gramophone and tape recordings, microphone announcements, or "live" programmes from concerts can be arranged to feed all, or selected, wards or rooms in the hospital.

Behind each of the fifty-three beds served is a wall panel with a programme switch, a volume control with an "off" position, and a socket into which the pillowphone is plugged. The pillowphone itself, neat and hygienic—a loudspeaker encased in sponge rubber, covered with washable plastic—can be placed on or underneath the pillow.

Though nurse-call facilities are not included in the Wisbech installation, patients can now summon a nurse simply by pressing a switch on a flexible lead pinned to the bedclothes, and then speaking into the pillowphone.—*B. I. S.*

World Hospital Congress to Be Held in Edinburgh

THE International Hospital Federation will hold its 1959 congress—the 11th—in Edinburgh The congress, which is expected to meet in June, will provide an occasion for some six hundred delegates from most of the countries of the world outside the Iron Curtain to exchange information and views on matters affecting hospitals

The object of the federation are to foster international exchange of information on hospital work and practice, promote hospital study, arrange tours and conferences, and conduct research.—*B. I. S.*

150 New Drugs

SOVIET research institutes have developed more than 150 new drugs in recent months. Many of them are already on the market.

Aminazin has proved itself a fine cure for heavy nervous ailments which were formerly regarded as incurable. It is already being widely used.

A preparation of vitamin B_{12} has proved an effective means of combatting anæmia. It has cured many patients who have suffered from pernicious anæmia for many years.

Kelin produced from a herb is a new drug to fight bronchial asthma. Another plant—colchicum—has yielded alcoholic colchamin to treat cancer of the skin

Diabetes is now combatted with a preparation known as rostinon which is much more effective than a similar drug called Nadizan used outside the U. S. S. R.

This year high blood pressure victims will get reserpin, a new drug produced from roots of the herb rauwolfia.

New drugs to treat cardio-vascular ailments, high blood pressure, influenza and other diseases are being manufactured.—*TASS.*

New Method of Treatment of Thrombophlebitis and Tropic Ulcers

A new method of treatment of thrombophlebitis and tropic ulcers by means of vacuum have been developed by A Safronov, a Moscow surgeon He designed a miniature vacuum pump driven by an electric motor The pump is used during surgical operations to suck away decayed cells and tissues as well as to increase the influx of blood and lymph to the injured part of the body.

Thrombophlebitis, the clotting of the blood vessels of the leg, often leads to gangrene and consequently to amputations. Dr. Safronov makes incisions in the stricken part and then by means of his pump sucks away substances which cause the decay of tissues. They are replaced with fresh blood, intra-tissue liquid, protoplasma and proteins from other parts of the body. These substances become a material for the building of new healthy cells and tissues which quickly close the wound. The use of vacuum also improves blood circulation in the area of the lesion.

Safronov's method has been used successfully during some three hundred and fifty operations.—*TASS*

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(*Continued from p. 2*)

programme of assistance to governments in which the preventive is given priority over the curative aspects of health work. This approach has achieved unprecedented success in the world-wide fight against such communicable diseases as malaria, tuberculosis, venereal diseases, and yaws.

About one-fourth of the world's population lives in malarious regions. A race against time has to be undertaken if these are to be cleared of the disease before the malaria-transmitting mosquitoes become resistant to insecticides, such as DDT. At the present time, WHO is participating in forty-seven anti-malaria projects in various parts of the globe.

TUBERCULOSIS CONTROL

WHO is helping to establish tuberculosis control programmes in about thirty countries, and it has assisted in the setting up of many demonstration and training centres. Vast BCG vaccination campaigns are being carried out; by 1956 more than 160 million people had been tuberculin-tested and more than 60 million vaccinated through the joint efforts of governments, WHO and UNICEF.

Penicillin has proved its value as the public health weapon of choice against syphilis and other related, but non-venereal, diseases such as yaws, bejel and pinta, debilitating and often crippling tropical diseases.

WHO assists in numerous campaigns for the control of trachoma, leprosy, rabies, yellow fever, plague, and many parasitic diseases. Medical research is stimulated and co-ordinated in WHO centres and laboratories. The World Influenza Centre in London directs a network of influenza laboratories in forty-five countries, and there is a similar network for poliomyelitis. Brucellosis, or relapsing fever, is studied in fourteen laboratories assisted by WHO.

SOCIAL PROBLEM

Sickness, according to the modern concept of public health, is a social problem involving the entire community, the services of which must be harnessed not only to conquer the disease-aiding environment but to work for positive health through organized community effort. With this concept in view, WHO is taking increasing interest in programmes of environmental sanitation and health education of the public.

One of the impediments to better health in S. E. Asia is the shortage of trained medical and health personnel. Therefore, emphas[is has] been placed on the trainin[g of] national health workers th[rough] demonstration projects, refr[esher] courses, strengthening m[edical] teaching institutions, and th[e award of] study fellowships in f[oreign] countries. The WHO Re[gional] office for South East Asia [con]centrates its efforts and resour[ces on] professional and technical tr[aining] activities and the promo[tive] aspects of public health, especially in regard to comm[unity] development.

Other projects in which W[HO] is assisting Member Countri[es of] South East Asia relate to ma[ternal] and child health, school h[ealth,] nutrition, mental health, vita[l and] health statistics and public h[ealth] administration.

What WHO is trying to d[o is to or]ganize a total war on diseas[e, to] prevent ill-health, whether it s[prings] from environmental, psychol[ogical] or socio-economic causes. Th[e task] is no doubt vast and h[azards] numerous. But there is sola[ce in] the thought that for the first [time] in history, the challenge has [been] taken up on a global basis, a[nd the] creative power of man is o[n in] the noblest war of all time[s.]



Photo P I B

A part of the delegation that met in New Delhi for the Fourteenth Session World Health Organization

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